

CECW-PC

MEMORANDUM FOR SPD RIT (ATTN: Mr. Ken Zwickl)

SUBJECT: Documentation of Review Findings for the Rio Salado Oeste Ecosystem Restoration Study, Salt River, Maricopa County, Arizona.

1. The documentation of review findings for the Rio Salado Oeste project is enclosed.
2. Any questions may be directed to Mark Matusiak at 202-761-5909.

Encl

/s/

ROBYN S. COLOSIMO, P.E.
Chief, Office of Water Project Review
Policy and Policy Compliance Division

CF:
CECW-P (w/encl)
CECW-PC file

Documentation of Review Findings
Rio Salado Oeste Ecosystem Restoration Project, Salt River
City of Phoenix, Maricopa County, Arizona

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1. Background

A. Project Location. The study area is located along the Salt River in Maricopa County, Arizona, within the City of Phoenix. The study area is approximately 8 miles long, and extends from 19th Avenue on the east to 83rd Avenue on the west. The study area encompasses approximately 20,480 acres.

B. Authority. The study has been authorized under two authorities; Public Law 761 (known as Section 6 of the Flood Control Act of 1938) dated June 28, 1938 and House Resolution 2425 dated May 17, 1994.

C. Non-Federal Sponsor. The non-Federal sponsor for the project is the City of Phoenix, in cooperation with the Flood Control District of Maricopa County.

D. Problem Identification. The near total diversion of Salt River water flows for human use, and the resultant loss of riparian habitat has caused a major reduction in native species diversity and has facilitated the spread of non-native species that have further damaged the ecosystem. Riparian systems in the arid regions of the southwest United States are a scarce and important habitat type- it has been estimated that between 75 and 95 percent of all wildlife species are dependent on riparian habitats during some point in their life cycles.

E. Alternatives. The plan development process investigated potential solutions to address the identified ecosystem problems, and screened these solutions to eliminate any ineffective or inefficient plans. A total of 20 alternative plans (19 action alternatives and the no-action alternative) were developed as outlined in Table V-4, page V-24 of the draft report). These alternatives were screened using evaluation criteria, and a total of five final alternatives resulted (Alternatives 2, 4, 5, 5A and 5B) as shown in Table V-8, page V-40 of the final report.

F. Recommended Plan. Alternative 5A has been identified as the recommended National Ecosystem Restoration plan. The NER plan would restore approximately 170 acres of stream channel habitat in the Salt River, 375 acres of cottonwood/willow riparian habitat, 417 acres of mesquite woodlands, 296 acres of riparian shrub, 52 acres of scrub-shrub habitat, and 180 acres of wetlands in association with two abandoned gravel pits. The tentatively selected plan would provide an increase of 267 average annual functional capacity units (AAFCU) above future without-project conditions (Table V-13). The total first cost of the recommended plan is \$164,950,000, with an estimated annual cost of \$13,296,000, and estimated annual O & M costs of \$2,137,000 (Table V-12). The recommended plan would have an estimated water demand of 9,293 acre-feet per year (Table V-9).

Note: The Discussion category in item 3 of this PGM contains a synopsis of the discussion of issues that took place during a September 14, 2006 teleconference call between SPL, SPD and HQUSACE representatives.

2. State and Agency Review. No substantive comments were submitted during the State and Agency review period, although several letters of support for the project were received.

3. Final Feasibility Study Review Comments.

A. Miscellaneous

1. Drawing of Recommended plan. Plate 7 depicting the recommended plan incorrectly displays the abandoned gravel pits as areas of open water instead of emergent wetlands, as noted in the report Recommendations section. In addition, there is no key on the legend identifying the hatched area of the map that represents the stream channel restoration areas of the recommended plan. This issue has been communicated to the District, and Plate 7 has been revised to address these concerns.

HQUSACE Assessment: **The issue is resolved.**

3. Draft Feasibility Study Review Comments.

A. Real Estate and Legal Issues.

1. Type of Estate to be Acquired. The type of estate (i.e., fee simple or easement) that is contemplated for the County of Maricopa land acquisition is still unresolved. This issue must be resolved prior to the release of the final feasibility report (see related comments in section 3.B.3a).

SPL Response: Assistant District Counsel, Anne Gamson, has provided a memo that addresses this comment. That memo is attached and summarized below.

Discussion:

As I understand the current documents, the non-standard estate, an easement estate, has been eliminated in favor of the standard fee estate. Such an estate was proposed in the original draft of the Feasibility Report and was revised a number of times to address concerns raised during review of the draft documents. Ultimately, due to those concerns about the use of the non-standard estate, it was eliminated from later drafts and the standard fee estate replaced it. The City of Phoenix, the Project Sponsor, however, would like to have a non-standard estate considered for the land that would need to be acquired from other public agencies, most particularly, Maricopa County.

Analysis:

I have reviewed the above PGM comment, the non-standard estate proposed in the earlier versions of the Feasibility Report, and the appropriate Arizona statute concerning conservation easements (33 A.R.S. 271-276). After having reviewed those 3 documents,

it is clear that what we are planning to do in this project is NOT a “conservation easement” as that term is defined and used under Arizona law.

What is intended by the proposed non-standard estate is much the same as what is intended by a number of our standard easement estates (i.e. channel improvement easement, flood protection levee easement, drainage ditch easement) - that we build something and then leave what we have built on the property, allowing the landowner to continue to use the real estate as long as the use does not interfere with the project. The proposed non-standard easement is a possessory interest. The intention is to build and maintain a habitat, which will include water features and plantings that will need to be maintained.

A conservation easement under Arizona law is a nonpossessory interest. The holder of a conservation easement imposes limitations or affirmative obligations for conservation purposes on the real property but the holder of the easement does not have possession of the real estate. For example, a holder of a conservation easement would be able to prevent the fee owner from building on the property or could require the owner to plant trees or bushes, but would not be able to enter into the property to plant trees and bushes himself.

The proposed non-standard easement is no different from any of our standard easement estates with respect to its running with the land and binding future owners. It will be a document recorded in the public land records, giving notice to any potential buyers of the property of the restrictions imposed on the property. However, because this estate is intended to be used on properties already in public ownership, there is little likelihood that ownership of the underlying fee will change in the future.

An easement was proposed instead of fee (making this a non-standard estate) acquisition for property that is already in public ownership by an entity other than the City of Phoenix. The sale of public land in fee in Arizona is often difficult due to various State laws requiring most publicly owned lands to be sold under specific procedures that would not ensure that they could be acquired by the Project Sponsor. The purchase of easements rather than fee avoids this problem.

Because there is no standard estate that takes into account the specific needs of an ecosystem restoration project, features of several standard estates were combined with the specific requirements for ecosystem recreation to create the nonstandard estate that was recommended for approval.

Conclusion:

Based on the foregoing discussion, I have concluded that the proposed nonstandard estate would be sufficient for project purposes. It will run with the land and will bind future owners of the land.

Discussion: Easement estate proposed for County lands in floodplain/floodway. The estate would be similar to joint use agreements used in flood control projects. County

would enter into agreement with City. There remains disagreement – will the estate survive fee transfer of underlying “running with land” as in fee in perpetuity. Arizona case law reference research has not discovered additional information.

Action to be taken: The Office of Water Project Review will contact HQUSACE Office of the Chief Counsel to request assistance in resolving the matter in coordination with SPD and SPL Offices of Counsel.

HQUSACE Assessment: The HQUSACE Office of the Chief Counsel has discussed the issue with SPD and SPL Offices of Counsel, and **a resolution has been reached.** HQUSACE has concurred with the SPL and SPD determination that use of easements as proposed is acceptable.

2. Real Estate Plan. The REP, Appendix H, indicates that 1,500 acres of land will be acquired for the project. This is a subset of the Project Implementation Area, which is the 100-year floodplain of this reach of the Rio Salado River and consists of 3,315 acres. All lands required for every project feature of the tentatively selected plan must be identified in the Real Estate Plan. A map showing all parcels of lands to be acquired must be included in the REP (ER 405-1-12, 12-16c(8)). The map provided in the Real Estate Plan shows the project implementation to be 3,315 acres, and does not clearly identify the 1,500 acres of project lands. It is important that the report clearly identify the minimum interest in real property necessary to support the project in accordance with ER 405-1-12, Chapter 12. The maps provided do not allow the reader to determine if the minimum amount of land needed is being acquired, nor if the plan is acquiring a sufficient amount of land for project implementation.

SPL Response: Concur, a more detailed map outlining the parcels to be acquired for the tentatively recommended plan is being added to the Real Estate Plan. This map will include an outline of the parcels to be acquired with project features overlain. In light of real estate costs the team has made minor refinements to the plan to both account for good real estate practices and reduce land requirements as much as practical while maintaining necessary lands for a operation and maintenance of a functioning project.

Discussion: None.

Action to be taken: As stated in response.

HQUSACE Assessment: Response is adequate. **The issue is considered to be resolved,** and the detailed maps of the parcels to be acquired have been included in the final report.

3. Land Acquisition Costs. Generally, for ecosystem restoration projects, real estate costs should not represent more than 25% of total project costs (ER 1105-2-100, E-30.f). Projects with land costs exceeding this target level are not likely to be given a high priority for budgetary purposes. The tentatively recommended plan requires \$55,900,000 for land acquisition, or approximately 34% of the \$164,950,000 total project cost.

SPL Response: As discussed with HQUSACE on 7/19/06 the guidance pertaining to real estate costs for ecosystem restoration projects as described in (ER 1105-2-100, E-30.f) will be added and exceedance of that level will be acknowledged in Chapter 6 (Description of the Recommended Plan) in discussion of LERRDS. An issue paper summarizing the increase in real estate costs for the project was provided to HQUSACE on March 7, 2006. In summary the real estate values in Phoenix rose significantly in the 2005. The original estimate for floodplain property utilized a value of \$20,000/acre. However, appraised values averaged approximately \$31,000/acre or a 55% increase. Phoenix, in Calendar year 2005 led the country in housing price increases. Overall property values in Maricopa County have climbed significantly, on average the assessed property values in the county are up almost 52% with some areas reported to have increased almost 70%.

Discussion: It was noted that land costs are important. Land costs above 25% will be examined. Information to describe increasing land costs should be available for inclusion in the final report. In addition, HQUSACE urged the District to strive to avoid any increases to the existing level of 34%.

Action to be taken: As stated in response above.

HQUSACE Assessment: Response is adequate. **The issue is considered to be resolved,** and additional information on land costs is included in the final report.

4. Certification of Legal Sufficiency. The draft feasibility report does not contain a certification of legal sufficiency from the District Counsel; such certification is required for the final report.

SPL Response: District Counsel will complete a certification of legal sufficiency when the report is finalized. Counsel did provide review of the Draft Report and that review was provided in the transmittal package.

Discussion: None.

Action to be taken: Certification will be furnished as part of the final report submittal.

HQUSACE Assessment: Response is sufficient. **The issue is considered to be resolved.** The legal certification has been included in the final report.

5. Editorial.

a. In paragraph 3, Special Note on Estates, delete the phrase “and assignable” in the phrase “...to explore the acquisition of a permanent and assignable easement...” Also, insert an “n” at the end of the word “know” in the phrase “...prerequisite made know by HQ...” Also, delete the phrase “and assignable” in the phrase “...must be a permanent and assignable easement...” Also, delete the word “in” in the phrase “...in which a reviewing attorney...” and delete the “s” on the word “attests,” and insert “be binding on

future fee owners of this property, and meets the requirements of a conservation easement” between “run with the land” and “under Arizona State law.”

Insert an apostrophe in between the “y” and the “s” in the phrase “attorney’s opinion,” and insert the phrase “from the District Counsel’s Office” following the phrase “attorney’s opinion.”

b. The following editorial remarks refer to the draft REP, and should be incorporated in the final REP:

i. In paragraph 3, Description of Lands owned by Non-Federal Sponsor, insert an “s” after “it” in the phrase “that the city perfect it lease.”

ii. In paragraph 4, Non-Standard Estates, there is no mention of acquiring the County of Maricopa lands in fee simple. This issue appears to be unresolved.

iii. In paragraph 6, Federal Lands Interests or Reservations, delete the additional superscript “t” in “67th Avenue” and add a period to the end of the first sentence. Also, delete the final “s” in the word “costs” in the phrase “...just compensation would be a Non-Federal Sponsor costs.”

iv. In paragraph 8, Project Maps, add a period to the end of the sentence.

v. In paragraph 12, Mineral Activity, please add a comma following the year “2008.” Also, delete the “as” in the phrase “...by the appraiser as to include...” Additionally, how were these sand and gravel lands appraised in the gross appraisal—were they evaluated as ongoing mineral extraction operations?

vi. In paragraph 15, LERRD Acquisition Schedule, delete the superfluous letter “I” in the listing “35th to 51st Avenues”

SPL Response: Editorial comments will be addressed and items corrected in the next version of the report.

Discussion: None.

Action to be taken: As stated above.

HQUSACE Assessment: Response is sufficient, **the issue is considered to be resolved**, and the above revisions have been included in the final report.

B. Recreation Plan.

1. Based upon the information provided, it cannot be determined whether all lands with recreation components are necessary for the ecosystem restoration project, because the Real Estate Plan did not clearly identify all parcels to be acquired (See comment 2.A.2,

above). Additional maps that overlay the recreation components on the proposed restoration areas are needed to resolve this question, and should be included in the final feasibility report.

SPL Response: See response to Comment A. 2 above.

Discussion: None.

Action to be taken: As stated in response.

HQUSACE Assessment: Response is sufficient. **The issue is considered to be resolved.**

2. The recreation plan states that "The Channel" (presumably the restored channel of the Salt River in the project area) will be open for equestrian use. The report should explain how such use of the restored channel would be compatible with the ecosystem restoration proposal, as noted in paragraph 12 of ER 1165-2-502. In addition, HQUSACE asks that the district describe facilities designed to facilitate equestrian use, if any.

SPL Response: There are no specific facilities for equestrian use. However, the multipurpose trails within the project are assumed to be suitable for equestrian use as they were on the Rio Salado project upstream. Language in the recreation plan that refers to "The Channel", "Terrace" and "Bank" is being rewritten and clarified to more clearly describe the locations where recreation trails will be designed and be compatible with ecosystem restoration.

Discussion: None.

Action to be taken: As stated in response.

HQUSACE Assessment: **The issue is resolved.**

3. Point-Value Assessment. Chapter 4 of the Recreation Plan - Point Value Assessment, indicates that the project recreation plan scored 90 out of a possible 100 points using the Unit-Day Method described in Economics Guidance Memorandum 06-03. The activities mentioned are wildlife/scenic viewing, picnicking, walking, hiking, biking, and horseback riding. Urban fishing may also occur. All of these activities are general, as the document indicates. HQUSACE has concerns with the ratings developed by the district to justify the recreation plan.

(1) The report indicates that the recreation experience scores 29 out of a possible 30 points, indicating that the recreation experience has numerous "high quality value" activities and some general activities. However, few of the identified activities listed appear to be high quality value, which is defined as those activities that are not common to the region and/or Nation, and that are of unusually high quality. The district indicated that the high quality value activities at the project site include habitat restoration, water

conservation areas, flora and fauna sanctuary, urban fishing, outdoor classroom, and birding, among others. Several of the items listed in this section are not activities, and should be eliminated from this evaluation (for example, flora and fauna sanctuary, outdoor classroom, water conservation areas and habitat restoration. Note: the ITR completed for the report also questioned whether several of the items included in the discussion are actually recreation activities). In addition, the justification for several of the identified activities, such as birding and urban fisheries, do not appear to be sufficient to qualify as high quality value activities, as described in the report. HQUSACE requests that the district re-evaluate the recreation experience scores without the inclusion of the non-recreation activities noted above, and discuss how the re-evaluation would affect the rankings presented in the report.

SPL Response: Concur that several of these items do not represent recreation activities. Items that would be considered high value would include bird watching, urban fishing, wildlife viewing and environmental education opportunities. The assessment of what is considered high-value is study area dependent. EGM 06-03 specifies that this determination is based upon whether such activities are uncommon to the region. Even accounting for recreation activities provided by, or to eventually be provided by the Rio Salado and Tres Rios projects, the recreation experience provided by Rio Salado Oeste will be uncommon to the regional market area, and it could therefore be argued that even the other more general activities could be considered high value in this context. As noted in report, there are very few recreation sites in the market area located in a riparian and wetland environmental setting. This enhances the value of these activities. The criteria for a point range of 17 to 23 for this category is more than one high value activity, whereas the criteria for the point range of 24 to 30 is numerous high value activities. The District feels strongly that the number and type of activities, including high-value activities, justifies a point value in the highest range. However, concur that a value of 29 insinuates that there are “numerous” high value activities, which is not fully supportable. In light of these considerations, the District proposes to revise the point value for this category to 24 out of 30.

Discussion: Some activities should recognize distinction in specific areas.

Action to be taken: As stated in response.

HQUSACE Assessment: **The issue is resolved**, and revisions to the point-value assessment section of the recreation plan as discussed above are included in the final report.

(2) The report contains a score of 12 out of 18 for Availability of Opportunity, indicating there is no equivalent opportunity within 1 hour travel time of the project site. It is clear from the information in the draft report that a number of opportunities exist near the project area that include the same general recreational activities, including the recently opened Rio Salado Phoenix project, located just upstream of the Rio Salado Oeste . Rio Salado Phoenix is a separate Corps projects, and it is not clear why the report does not consider it as an opportunity available within 1 hour of the project site. The

consideration of opportunities should also take into account any local or regional parks. HQUSACE requests that the district re-evaluate the availability of the recreation opportunity, and discuss how the re-evaluation would affect the rankings presented in the report.

SPL Response: The point value assigned for the availability of opportunity considered that the Corps projects, although separately evaluated, will be linked together to provide a more comprehensive recreation opportunity to the region. Accordingly, the assessment of the availability was based upon other similar recreation outside of this Salt River recreation corridor. There are no local parks that offer a similar recreation experience to the proposed recreation plan, and therefore, even if considering Rio Salado and Tres Rios, this would only represent two similar facilities. The point value range for several facilities within one hour is 4 to 6, whereas the range for one or two within one hour is 7-10. Giving consideration to the opportunities provided by Rio Salado and Tres Rios, the District proposes to revise the point value for this category to 8 out of 18.

Discussion: None.

Action to be taken: As stated in response.

HQUSACE Assessment: **The issue is resolved**, and the revisions to the point-value assessment section of the recreation plan as discussed above are included in the final report.

(3) The project recreation component scores 17 out of 20 for Environmental value, meaning that the site has outstanding esthetic quality and that no factors exist that would lower the quality of the experience. The recreation guidance of ER 1105-2-100 indicates that major esthetic qualities to be considered include geology and topography, water, and vegetation. Factors to be considered that would potentially lower the quality of experience include air and water pollution, pests, poor climate, and unsightly adjacent areas. The project site is within a large urban area that has significant environmental issues, including a non-attainment status for air quality and a number of water quality/pollution issues. In addition, a variety of urban, commercial, and industrial areas will be visible from the proposed trail system. Given the urban setting viewshed of the project area and the known air and water quality impairments, the determination of outstanding esthetic quality appears to be unjustified. HQUSACE requests that the district re-evaluate the esthetic quality of the project area, and justify the rankings presented in the report.

SPL Response: As noted, the major items to consider include geology, topography, water and vegetation. The point values assessed focused on the recreation site itself, and not on surrounding urban areas. Within the project site, due to the environmental restoration focus of the project, it is assumed that the area will in fact have excellent esthetic qualities. Although some commercial and industrial areas are adjacent to the project area, the esthetics of these areas are anticipated to improve due to urban renewal efforts along the overall Rio Salado area. Overall, a very high esthetic quality is justified, and in

consideration of the scarcity of this type of environment in the region, it could be argued that the quality would be considered outstanding. However, in consideration of areas surrounding the project area and issues cited above, the District proposes that an environmental value of 12 be applied.

Discussion: None.

Action to be taken: As stated in response.

HQUSACE Assessment: **The issue is resolved**, and the revisions to the point-value assessment section of the recreation plan as discussed above are included in the final report.

C. Feasibility Report.

1. The use of the term Project Implementation Area in the report is confusing given that this area is not representative of the project lands, which consist of approximately 1,500 acres within the 3,315 acres of the Project Implementation Area (which itself is the approximate limit of the 100-year floodplain of this reach of the Salt River). Although the report apparently used the 100-year floodplain limit to differentiate this area from the 20,000+ acres of the Study Area, the term Project Implementation Area could be interpreted by readers to mean the action area for the measures discussed in the tentatively selected plan.

SPL Response: The term project implementation area was used in section 2.3 Study Area on Page II-3 to define the difference between the study area considered in planning and the area where project features may be implemented. It was presumed that implementation of any recommended plan would take place within the 100 year floodplain so that general area of approximately 3,300 acres was used.

The report states on Page II-3 that “While this is a large study area extending beyond the river banks, any implementation of project features would be associated with the river floodplain.” To address confusion to this will be added “Alternatives considered in the study are within that implementation area.”

Discussion: None.

Action to be taken: As stated in response.

HQUSACE Assessment: **The issue is resolved.** The maps included in the final report depicting the overlay of the restoration and recreation project features will help to clarify the distinction between the project implementation area and the project lands.

2. Chapter 4 - Existing Conditions (Recreation). The discussion of the Tres Rios Project, as well as other local/regional future recreational facilities and opportunities (pages IV-56 to 57) should not be included in the “Existing Conditions” section, but should be part of

the Future Without-Project discussion. If the Rio Salado Phoenix project, immediately upstream, is open for recreational use then it should remain as discussed in this section.

SPL Response: The Rio Salado project description is appropriate in the Existing Conditions section as that project is now open. The second paragraph on Page IV-56 discussing Tres Rios will be moved to Section 4.3.5 Recreation which is on Page IV-67.

Discussion: None.

Action to be taken: As stated in response.

HQUSACE Assessment: **The issue is resolved**, and the above revisions are included in the final report.

3. Chapter 4 - Future Without Project Conditions (Recreation). This section presently states that “The greater Phoenix area does not currently have any significant riparian habitat areas with supporting recreation.” Since this is the Without-Project Condition discussion, this section needs to detail all the recreational facilities and opportunities that will be in the vicinity of the project in the period of analysis, such as Tres Rios, Rio Salado Phoenix, and local/regional future projects, regardless of whether they are located within, or have views, of riparian habitats. Riparian habitat areas, in and of themselves, are not a requisite condition for recreation areas.

SPL Response: Discussion of recreation resources in the project area both existing and into the period of analysis is included in the Economic Appendix but was not summarized in the proper section in Chapter 4. The information in the appendix related to recreational facilities and opportunities will be added to the Future Without Project Conditions. While riparian areas may not be a requisite condition for recreation they are an important and scarce regional resource there is demand for recreation resources in the vicinity of riparian habitats. As discussed above EGM 06-03 also specifies that determination of high value activities is based upon whether such activities are uncommon to the region.

Discussion: None.

Action to be taken: As stated in response.

HQUSACE Assessment: **The issue is resolved**, and the above revisions are included in the final report.

4. Cost Estimates; Appendix G, page 37 and Appendix K, page 1-2.

(1) This project describes extensive O & M responsibilities and costs which are tallied in Table 21. Appendix K offers some information on the makeup and extent of these costs, but HQ cannot find the computational backup which shows how the raw figures in Appendix K have been computed, resulting in the figures in Table 21. For example, Appendix K notes an assumption of 25% replanting after a flood event, but

does not show the expected frequency of events used to compute the O & M estimate. A table that clearly shows the calculations is needed to better understand the components of the cost estimates for O & M. The O & M responsibility relates to overall sustainability of outputs, and the prospect for successful realization of project benefits due to the Federal investment.

SPL Response: Concur that discussion of O&M in Appendix K requires more detail. Assumptions used in calculating O&M will be added to Operation and Maintenance Requirements on Page 6 of this appendix. O&M Estimates have utilized information from other projects, including Rio Salado and this will be more clearly stated in the documentation. The assumption of 25% replanting is based upon modeled discharges and velocities that may be expected. It is also based upon observations during the spring of 2005 and effects on the Rio Salado Project under construction.

Discussion: None.

Action to be taken: As stated in response.

HQUSACE Assessment: **The issue is resolved**, and the above revisions to Appendix K are included in the final report.

(2) In addition, the MCACES (Appendix K) cost estimate of \$160,278,809 does not correspond to the cost estimate of \$163,581,307 found in Table VII-1, page VII-7 of the report. Please explain the difference in the cost estimates, and revise the report as needed.

SPL Response: Concur, the nearly \$3M difference is mostly due to the fact that Table VII-1 includes Monitoring and Adaptive Management which is not included in the MCACES (Appendix K), these will be added to MCACES. In addition, LERRDs were rounded up to \$55.9M in the table and there is a discrepancy in recreation costs in MCACES due to mark ups. These are all being corrected and the report being revised accordingly.

Discussion: None.

Action to be taken: As stated in response.

HQUSACE Assessment: **The issue is resolved**, and the above revisions are included in the final report.

D. Environmental Impact Statement

1. Page ES-4.

(1) The district indicates that issues resolution for compliance with various statutes, including Sections 404 and 401 Clean Water Act, National Historic Preservation

Act, and Endangered Species Act will be resolved during preliminary engineering design phase. Compliance with these statutes should be completed prior to the release of the final EIS, to the extent practicable.

SPL Response: The text in the Executive Summary (ES 2.2) will be revised to more accurately indicate the current status of compliance with these statutes. Placing the discussion of these statutes under this heading is misleading, and does not accurately convey the extent of coordination to ensure compliance with the Clean Water Act, National Historic Preservation Act, and Endangered Species Act. Compliance with all statutes will be completed prior to the final EIS, to the extent practicable.

(2) Additionally, this section states that "future operational activities associated with sand and gravel mining in the project area would need to be defined." HQUSACE requests clarification concerning how these undefined future mining activities were considered in the plan for ecosystem restoration, and how the FWO project condition was determined in the absence of this information.

SPL Response: Concur; this statement will be corrected and clarified. The FWO project condition was determined to the extent possible by considering both land use plans and permits. We can assume that mining will continue as long as there is a resource and a demand, in doing so we assumed that those existing operations will move to the West of the study area to follow demand (construction). Existing operations in the East end of the study area will close but new ones will open to the West. Since business plans are not readily shared it is nearly impossible to define the specific detailed plans over the entire study area. The sentence is referring to site specific conditions which will need to be revisited during PED.

Discussion: None.

Action to be taken: As stated in response.

HQUSACE Assessment: **The issue is resolved**, and the above revisions to the Future Without-Project condition are included in the final report.

2. Environmental Justice ("Environmental Impacts" and "Environmental Compliance")
The EIS states on page 4-32 that there are low-income and minority neighborhoods are located in the proximity to the project area. The district determined that impacts would not be inequitably distributed to affect these EJ populations. The report should include a brief discussion concerning how was this determination was made, and the coordination and outreach efforts that were conducted by the district to reach potentially-affected populations.

SPL Response: Concur. A discussion concerning the environmental justice determination will be added to Section 4.9.2.2. The discussion concerning Public Involvement in Chapter 9 will be expanded to further describe the coordination and outreach efforts conducted to reach potentially-affected populations.

Discussion: None.

Action to be taken: As stated in response.

HQUSACE Assessment: **The issue is resolved**, and the above revisions to the environmental justice section are included in the final report in section 4.9.2.2.3 on page 4-34 of the FEIS

3. Cumulative Impacts (Air Quality) The draft report and draft EIS do not appear to have considered cumulative impacts to air quality coming from non-federal activities going on in the project vicinity, in accordance with section 1508.7 of the NEPA regulations. The final report and final EIS should incorporate such information.

SPL Response: Concur. The DEIS discussed air quality impacts anticipated from the other federal ecosystem restoration projects in Maricopa County, but omitted how these relate to the overall emissions inventories for the various non-attainment areas. We have coordinated with the Maricopa County Air Quality Department, and will include a discussion of the 2002 emissions inventories (the last year for which complete data are available) in the FEIS.

Discussion: None.

Action to be taken: As stated in response.

HQUSACE Assessment: **The issue is resolved**, and the above revisions to the air quality section are included in the FEIS.

4. Cumulative Impacts (Land Use) The draft report did not consider cumulative impacts of future development in the project vicinity. Indeed, of the 3,315 acres in the Project Implementation Area, the Real Estate Plan only calls for 1,500 acres to be acquired. What is the likelihood of continued development in the remaining 1,800+ acres, and how would the future development (and the resulting impacts to water resources) potentially impact the Corps restoration areas? The final report and final EIS should incorporate such information.

SPL Response: Concur. Future land use changes in the floodplain area were considered in the formulation and modeling of benefits as described in functional assessment responses below. This statement and additional discussion concerning future land use development in the project vicinity will be added to Section 4.11.2.2.3. A brief cumulative impact discussion concerning projected development in the region will be added to Cumulative Impacts Section 5.2.11. Urban demand for water supply does not affect project benefits as there is a committed supply of effluent for the project. Storm water runoff at existing outfalls will not likely change in the already developed areas.

Discussion: None.

Action to be taken: As stated in response.

HQUSACE Assessment: **The issue is resolved**, and the above revisions concerning future land use are included in the final report.

5. Cumulative Impacts (Public Health and Safety) The report states that implementation of the "Salt River ecosystem restoration projects" would eliminate wildcat dumping, and would create a more regulated environment for recreational users. It should be recognized that the recreational features of this restoration project would also result in a large increase in the number of people visiting this area, and the impacts of this increased public access must be considered. Additionally, project lands are adjacent to some other public and private lands, and the cumulative impacts analysis should consider the access and resultant uses originating from these adjacent lands

SPL Response: Concur. Additional discussion concerning the impacts of increased recreational use for the Oeste area will be added to a new Section 4.13.2.2.5 and increased use of the Salt River Corridor and its impacts will be better addressed in the Cumulative Impacts section 5.2.13.

Discussion: None.

Action to be taken: As stated in response.

HQUSACE Assessment: **The issue is resolved**, and the above revisions concerning cumulative impacts to public health and safety are included in the final report.

6. Environmental Compliance (Air quality) The information presented concerning compliance with the Clean Air Act needs to be coordinated with and confirmed by the appropriate State air quality authority, and documentation should be included in the report.

SPL Response: Concur. Maricopa County Air Quality Department (MCAQD) has provided comments on the DEIS. Comments and responses will be in a new Appendix D (Comments and Responses). The emissions calculations and air quality discussions in the FEIS will be revised to address the comments provided by the MCAQD.

Discussion: None.

Action to be taken: As stated in response.

HQUSACE Assessment: **The issue is resolved**, and the revisions discussed above are included in the final report.

7. Environmental Compliance (ESA) A summary of the information in the USFWS letter of March 22, 2004 concerning threatened and endangered species should be

included in the final report, along with any subsequent determinations pertaining to Section 7 Endangered Species Act Consultation. All letters from the USFWS concerning the consultation process should be incorporated into the final EIS. Ordinarily, the draft feasibility report should include a determination of whether the project will not effect on listed species; may affect listed species, but is not likely to adversely affect them; or may adversely affect threatened or endangered species. Please include this determination in the final report, and complete the documentation of the section 7 ESA consultation process.

SPL Response: Concur: The District received a concurrence letter from USFWS dated August 7, 2006. The Biological Assessment and associated correspondence will be included in the revised Appendix B (Biological and Cultural Resources Coordination). During preparation of the FEIS, Sections ES 2.3, 3.4.3, 4.4.2 and 7.4 will be revised to incorporate the results of the Section 7 consultation.

Discussion: None.

Action to be taken: As stated in response.

HQUSACE Assessment: **The issue is resolved**, and the revisions to Appendix B as discussed above are included in the final report.

8. Public Involvement This section should state the date the NOI for the project was published in the Federal Register.

SPL Response: Concur. The date for the NOI (August 28, 2001) will be added to Chapter 9.

Discussion: None.

Action to be taken: As stated in response.

HQUSACE Assessment: **The issue is resolved**, and the date of the notice of intent as discussed above is included in Chapter 9 of the final report.

E. Appendix I: Functional Assessment, With- and Without Project Conditions

1. Page 3 of Appendix I indicates that the study area is 3,148 acres. According to the Feasibility Study, the Study Area is 20,480 acres and the Implementation Area is 3,315 acres. Please correct this inconsistency and verify that it did not impact the Functional Assessment.

SPL Response: The “study area” referenced in Appendix I is referring to the subset of the overall study area evaluated in the Functional Assessment. Implementation Area is merely referring to the approximate 100 yr floodplain where any project features may be implemented. Terminology will be modified and clarified as to not appear as an

inconsistency. Those acres associated with the functional assessment specifically the Partial Wetland Assessment Areas only comprise 1,774 acres. Other “cover types” including agriculture, urban, parks, etc were tracked and considered in planning and the assessment but unless modified to wetland or riparian habitat type do not impact the Functional Assessment.

Discussion: None.

Action to be taken: As stated in response.

HQUSACE Assessment: **The issue is resolved**, and the clarifications to the study area and implementation area as discussed above are included in the final report.

2. Page 9 of Appendix I states that groundwater levels in the Rio Salado Oeste study area currently range from 30 to 100 feet below the land surface. According to the Feasibility Study (Figure IV-4) depth to groundwater ranges from the surface to 112 feet. In the mid to eastern half of the Implementation Area quite a bit of land is shown to have groundwater within 5 feet of the surface. Please correct this inconsistency, and discuss whether this impacted the Functional Assessment.

SPL Response: One variable associated with one functions in the Functional Assessment considers depth to groundwater (DEPSATSED). The model accounts for average depth to groundwater below the surface of the entire area. The overall depth to static groundwater levels through the 8 mile reach were taken into account in the model, with the understanding that there are some locations with slightly shallower levels at times. This variable under with project conditions did not change significantly as it is not anticipated that depth to groundwater will recover to less than .25 m over the entire area as would be required to change the model results.

The feasibility report does state that Figure IV-4 is an approximation of groundwater depth based upon an interpolation of well data and field observation. These are not intended to be precise numbers as levels fluctuate but to help describe that there are shallower groundwater levels in some areas of the study area. This will be further clarified in the report. Groundwater below the surface fluctuates and static groundwater elevation is estimated at somewhere between 20-50 feet within the channel and 60-100 outside the channel.

Discussion: None.

Action to be taken: As stated in response.

HQUSACE Assessment: **The issue is resolved**, and the clarifications to the status of ground water levels as discussed above are included in the final report.

3. Page 25 of Appendix I presents assumptions used to forecast the Without-Project Conditions. However, no such set of assumptions is given for forecasting the With-

Project Conditions. Table 8 projects acreages of cover types for Target Years 0, 1, 6, 26, and 51 under the Without-Project Conditions. This is not done for the With-Project Conditions. It would be very beneficial to have a table similar to Table 8 for the With-Project Conditions so that a comparison of projected cover types over 50 years can be done.

SPL Response: Major assumptions are noted on Summary Tables starting on Page 38 of Appendix I but will be summarized in the main appendix. Assumptions made in forecasting changes to model variables and are noted in project files. These will be summarized for inclusion in the Summary Tables section at the back of Appendix I.

Tables projecting acreages of cover types for Target Years 0, 1, 6, 26, and 51 are included in Summary tables beginning on Page 33 of Appendix I. These tables include both the projections in Table 8 and those for each alternative.

Discussion: Consistent set of with-project as for without-project conditions.

Action to be taken: As stated in response.

HQUSACE Assessment: **The issue is resolved**, and the revisions to the future with-project conditions as discussed above are included in the final report.

(1) The Future-Without Condition assumed that all remaining agricultural land (133 acres) will be developed within five years. Since the Real Estate Plan indicates that only 65 acres of private lands are to be acquired as part of the project, which means that at a minimum (if all acquired private lands are agricultural), 68 acres of agricultural lands will still be developed within five years under the With-Project Conditions. How was this considered in projecting project benefits?

SPL Response: There are far more than 65 acres privately held in the project area. In addition to the 65 acres of various land uses approximately 700 acres classified as sand and gravel operations are in private ownership. It was assumed that all agricultural land will be converted to urban use in both without and with project conditions. The habitat functions within the model Function 8, 9 and 10 include a landscape scale variable (LANDBUFF) which accounts for the adjacent land uses whereby functional value is decreased when there is likely to be disturbance from adjacent land uses.

Discussion: None.

Action to be taken: As stated in response.

HQUSACE Assessment: **The response is adequate.**

(2) Similarly, due to increased urbanization and reduced water supply, the Without-Project Conditions show a drastic decrease in cottonwood-willow habitats and open water in the active channel, and emergent wetlands in the uplands, as well as an

increase in scrub-shrublands and bare earth. Table 8 also projects that under the Without-Project Conditions that residential, industrial and transportation venues in the uplands will increase by 133 acres in the next 50 years. It is clear that increased urbanization, and therefore demand for water supply, will still occur with project implementation. The draft report does not discuss how these continued detrimental impacts were considered in projecting project benefits.

SPL Response: Continued impacts of adjacent lands being developed were accounted for in the variable described in response to the question above. Urban demand for water supply does not affect project benefits as there is a committed supply of effluent for the project.

Discussion: None.

Action to be taken: As stated in response.

HQUSACE Assessment: **Response is sufficient.**

(3) In the draft Real Estate Plan it states that "The City of Phoenix is also acquiring some of this private land [in Study Area] as opportunities arise in an ongoing effort at regenerating this urban corridor for public use. The City is acquiring this land independently of the proposed Rio Salado Oeste project." Please explain how this ongoing acquisition effort affects projected development within the floodplain, and how this was considered in evaluating the With- and Without-Project Conditions.

SPL Response: The affect of acquisition on evaluating with and without project conditions in the functional assessment is minimal at best. Ownership changes within the floodplain are not anticipated to change the overall land use, which is what would affect model results. The City has acquired some lands from either private entities or public agencies since the study began in 2001 however, it should not be misconstrued that this is an ongoing acquisition effort within the floodplain. One parcel described on Page III-11 of the Feasibility Report has been considered in evaluating both the without and with project condition with the assumption that it will be in place in either instance.

Discussion: None.

Action to be taken: As stated in response.

HQUSACE Assessment: **Response is sufficient.**

4. Alternative Formulation Briefing Review Comments.

A. Cultural Resources

1. Section 4.2.8.3 Page IV-41 Previous Work in the Study Area and subsequent Sections.

a. Narrative: The narrative on page IV-41 and IV-42 offers specific information concerning historic properties within “the Study Area.” In contrast though, is the narrative contained in Section 4.2.8.4 Records and Literature Search. This narrative notes that a literature search of the project APE (presumed to be the Area of Potential Effect as defined for Section 106 of the National Historic Preservation Act) revealed that archeologists “had never surveyed the APE.” Finally, on page IV-43 there is Section 4.2.8.5 Recommendations. In this section we find that there are Hohokam sites “near the project area.” Section 4.2.8.5 also appears to contradict the previous section’s narrative with references to “surveys” and a “reconnaissance survey” in the “project area” when the previous section states that no such work has been performed in the APE.

b. Concern: There is no defined relationship between the cited “Study Area,” the “APE,” and “the project area.” In the Study Area of Section 4.2.8.3 there are historic properties, in the APE of Section 4.2.8.4 there are none, and there may be historic properties near or in the project area of Section 4.2.8.5.

c. Recommended Resolution: The identification and treatment of historic properties for a Federal undertaking is guided by Section 106 and its implementing regulations. Accordingly, the controlling term and extent of Corps authority is defined by the Area of Potential Effect. The narratives on pages IV-41 through 44 should be revised for consistency of terminology and geographical consideration. Any discussion of historic properties, therefore, should be placed within the context of the undertaking’s Area of Potential Effect. A map or series of maps would aid the reader tremendously in gaining a better understanding of the Rio Salado Oeste Area of Potential Effect.

SPL Response: Concur. Descriptions of historic properties in the "project area" is referring to the general vicinity of the Salt River and is included for historic context to describe the known work and sites that have been located. Clarification will be provided in the document so that the reader knows the difference between general descriptive historical information of the vicinity and the APE.

Discussion: None.

Action taken: Sections 4.2.8.3 through 4.2.8.5 were modified to address the concerns.

HQUSACE Assessment: **The issue is resolved.**

2. Section 4.2.8.5 Page IV-43 Recommendations.

a. Narrative: “Additional surveys may be conducted as alternatives are refined.

b. Concern: On page VI-1 Los Angeles District presents, in considerable detail, the Recommended Plan. It appears that, with the presentation of the Recommended Plan, consideration of alternatives seems to be as refined as it is going to get. Therefore, the

suggestion that additional surveys depend on future alternative outcomes of the planning process seems disjointed and in contradiction to other information presented in the report.

c. Recommended Resolution: The narrative on page IV-43 should acknowledge that the District is presenting a Recommended Plan. That Plan should serve as the basis for defining the Area of Potential Effect (see item b, above) and, the evaluation of the need for further work to identify historic properties can then be based, in part, on the results of past efforts in and around the Area of Potential Effect.

SPL Response: Concur. The sentence "Additional surveys may be conducted as alternatives are refined." will be stricken. The sentence is remnant from a previous draft.

Discussion: None.

Action taken: Section 4.2.8.5 modified as recommended.

HQUSACE Assessment: **The issue is resolved.**

3. Section 4.2.8.5 Page IV-43 Recommendations

a. Narrative: "A letter has been sent to the State Historic Preservation Office (SHPO) with our determinations in accordance with 36 CFR 800.4(d)."

b. Concern: No date is provided for the letter to the SHPO and it is unclear as to what "determinations" were expressed by the district. Section 106 implementing regulations define specific time requirements for SHPO responses to certain types of findings. It is unclear as to whether the SHPO is meeting its responsibilities within the context of the Section 106 process and the report narrative offers no insight into the nature or content of the SHPO reaction to the district's letter.

c. Recommended Resolution: The district should supply the date of the correspondence, more specific language on the content of the correspondence, and the nature and content of the SHPO reaction to the district's "determinations."

SPL Response: Concur. The SHPO letter was sent on July 6, 2005 and all necessary documentation is included in the EIS. More specific language including correspondence will be included in the Draft Report and EIS.

Discussion: None.

Action taken: Section 4.2.8.5 modified as recommended.

HQUSACE Assessment: The issue is partially resolved. Section 4.2.8 of the draft report discusses coordination with the SHPO, and states that all pertinent correspondence is included in Appendix N of the EIS. This statement is incorrect, because Appendix N is the Adaptive Management and Monitoring appendix, and there is no appendix for

cultural resources. Please include all appropriate correspondence related to coordination with the SHPO in the final report.

SPL Response: See revised text in section 4.2.8.5.

HQUSACE Assessment: **The issue is resolved.**

4. Section 7.6.5 National Historic Preservation Act

a. Narrative: “An archeological field survey of the proposed project Area of Potential Effects (APE) has been conducted in accordance with the National Historic Preservation Act of 1966 (36 CFR 800).”

b. Concerns:

1) The National Historic Preservation Act is codified in the United States Code and should be referenced with a U.S.C. citation. The author incorrectly cites 36 CFR 800, the implementing regulations for section 106 of the statute, in the narrative.

2) The narrative moves in the direction of clarifying the inconsistencies discussed above for Section 4 cultural resources discussions. There are, however, still concerns about what work was done and where it was done. For example, the terms “survey,” “reconnaissance survey,” and “archeological field survey” are employed in Sections 4 and 7 of the report without any definitions applied to these terms. Also, it is very difficult to discern the nature or character of the results of the cultural resources investigations.

c. Recommended Resolution:

1) Edit the narrative to correct the U.S.C. citation after the title of the statute.

2) Refer back to Section 4 of this report and ensure that terms are used consistently and, where appropriate, defined to provide the reader with a clear understanding of the nature and substance of the investigation.

3) Clarify, either through additional narrative in the body of the report or in an appendix, the results and findings of field investigations conducted within the Area of Potential Effect. At present, Section 4.2.8.4 of the report states categorically “that archeologists had never surveyed the APE” and Section 7.6.5 categorically states that “(a)n archeological field survey of the proposed . . . (APE) has been conducted. . .” It is unclear at present how both of these statements can be accurate and a review of the work that was actually done and the findings would be most helpful.

SPL Response: Concur. Section 4.2.8.4 states the findings of the literature search. The report says in section 4.2.8.5 that a Corps staff archaeologist conducted surveys within the APE. This was done after the literature search. This will be clarified in the Feasibility Report and included in the Draft Report and EIS.

Discussion: None.

Action taken: Section 7.6.5 was rewritten to address the concern as described.

HQUSACE Assessment: **The issue is resolved.**

5. Section 7.6.5 National Historic Preservation Act

a. Narrative: “If cultural resources are discovered during construction and cannot be avoided, work will be suspended in that area . . .the Advisory Council on Historic Preservation would be provided the opportunity to comment in accordance with 36 CFR 800.11.”

b. Concern: Section 106 of the National Historic Preservation Act and its implementing regulations found at 36 CFR Part 800 are clear in intent and purpose: Federal agencies must make reasonable and good faith efforts to identify historic properties within the APE of a Federal undertaking prior to the expenditure of Federal funds. The term “prior to the expenditure of Federal funds” usually means prior to the initiation of construction. When historic properties are identified within the APE, the agency must evaluate how the property will be affected by the undertaking and, if it is determined that the property will be adversely affected, the agency must work with the SHPO and when appropriate, the Advisory Council on Historic Preservation and other parties to avoid or mitigate adverse effects. As a general rule, a Federal agency can only propose a statement about treatment of historic properties discovered during construction after it has completed the Section 106 Process (36 CFR Parts 800.4 through 800.6). The narrative currently under consideration does not clearly demonstrate compliance with 36 CFR Parts 800.4 through 800.6, and in the current version of the Federal regulations, 36 CFR Part 800.11 addresses Documentation Standards and not the ACHP opportunity to comment.

c. Recommended Resolution:

- 1) Substitute the current narrative with a description of how the district has discovered, or prior to initiation of construction, plans to discover historic properties.
- 2) Present a description of the identified and/or potential effects of the undertaking on historic properties.
- 3) Discuss known or potential treatment options to mitigate adverse effects to historic properties.

4) Eliminate the reference to 36 CFR Part 800.11 because it does not address the ACHP opportunity to comment.

SPL Response: Concur. The District understands the Section 106 regulations. The intent of that statement is as a disclaimer that although a reasonable and good faith effort has been made to identify historic properties, should anything be found during construction work will be suspended and appropriate action taken. More detailed description of this will be included in the Draft EIS to address the reviewers concerns.

Discussion: None.

Action taken: Section 7.6.5 was rewritten to address the concern as described.

HQUSACE Assessment: **The issue is resolved.**

B. Real Estate and Legal

1. Real Estate Needs for Invasive Species Management. In the main body of the AFB document, Section 6.2.6, Invasive Species Management, states, “Invasive species such as saltcedar and Arundo would require removal and management with project implementation. This would likely require physical removal and ongoing maintenance through the life of the project.” Has this need been fully incorporated into the real estate plan and the proposed non-standard estate? Namely, does the language “...including removal of invasive or undesired vegetation...” in the proposed non-standard estate cover all of the removal and management tasks envisioned over the life of the project?

The text of the non-standard estate contains the phrase, “provided that no excavation, placement of landfill, removal of vegetation, or tilling of the land shall be conducted...” Should the “removal of vegetation” here be further clarified to differentiate it from the “invasive or undesired vegetation” that we want removed?

SPL Response: Concur. The language in the real estate plan is intended to include all that is necessary for the project. This will be clarified.

HQUSACE Assessment: The issue has been resolved.

Discussion: None.

Action taken: Non standard estate was removed from the RE plan with the reference to “removal of vegetation”.

HQUSACE Assessment: **The issue is resolved.**

2. Narrative Summary of Draft Real Estate Plan.

a. Section 2, Estimated Values, states that the City is performing the gross appraisal. A gross appraisal must be performed, and its results incorporated into the REP, prior to release of the Feasibility Report.

SPL Response: Concur. The Gross Appraisal is being performed it is the intent to incorporate those results prior to release of the Feasibility Report.

Discussion: None.

Action taken: As stated above, gross appraisal is being incorporated into the Draft Report and RE Plan.

HQUSACE Assessment: **The issue has been resolved.**

b. Section 3, Recommendation for Easement:

(A) In the phrase “Channel Improvement Estate” in the second sentence, revise to read, “Channel Improvement Easement.”

(B) Delete the third and fourth sentences, i.e., “Comments and input...” through “...runs with the land.”

SPL Response: Concur. Will be modified.

Discussion: None.

Action taken: Gross appraisal estimates are included in the Real Estate Plan.

HQUSACE Assessment: **The issue is resolved.**

3. Draft Real Estate Plan

a. Section 2, Environmental Restoration Purposes and Related Project Features: (a) revise “credited” to “potentially credited” in the fourth paragraph (b) change “These” to “The” in sixth sentence.

[Chart] Major Land Owners/Classes: (a) For Maricopa County, the recommended estate is “easement.” Is there any way that the City and County can make a deal so that the City can acquire fee simple title? (b) For “State of Arizona-Trust Land,” the recommended estate is “easement.” In research on the Paseo de las Iglesias project undertaken by SPL OC to address CECC-R issues, it was discovered by SPL OC that requiring an easement for a time period exceeding 50 years [obviously, the perpetual easement here falls into that category] will require participation in the AZ State auction process for those lands-the same auction process that would be required to obtain a fee simple estate. Therefore, shouldn’t the recommended estate be “fee simple” given that the process will be the same, and likely the appraisal amounts for both estates will be very close, as they were in Paseo? (C) For BLM land, on which the City has an existing lease (for “Recreation and

Public Purposes” as listed in Section 6), how will the recommended estate of “easement” be acquired from BLM-what is the process?

SPL Response: a. The local sponsor is currently discussing how to proceed with county lands and has stated that they would still like the option to acquire lands with an easement if it is sufficient for the project. b. State Lands will be modified to fee simple to account for the requirements for State Trust Lands. c. BLM lands: Recreation and Public Purposes Act (68 Statute 173; 43 United States Code 869 et. seq.) The act authorizes the sale or lease of public lands for recreational or public purposes to State and local governments and to qualified nonprofit organizations. The City of Phoenix applied for and was granted an R&PP lease for the subject property in 2004, that lease was issued for this project. Applicants are required to first accept a lease, or lease with option to purchase, to assure approved development takes place before a sale is made and a patent (Government deed) is issued. The City of Tempe utilized a similar process for the Rio Salado project which is under construction.

Discussion: Comment is seeking information related to the proposed “conservation” easement - consistency with conservation easement statute of the State. BLM patent process – in fee – is currently in draft REP. The State and BLM lands will be acquired in fee. The remainder of the discussion centered on the County lands that are needed for the project. City of Phoenix states they are currently not in position to say that interests in county lands will be acquired in fee – the City wishes to keep its options open to consider less than fee acquisition. There is a need for assurance that estate is appropriate for project. They have not had formal discussions to commit to fee acquisition. City believes that there will be negotiations that will determine the extent of its acquisition. City questions the need to commit to fee at this time, in their mind limiting real estate interest to fee. Discussion turned to the process. The estimate of project cost including LERRDs is for the purpose of project authorization, so if fee is specified for all lands, it is a conservative estimate. If later investigations show that easements are possible (legal, cheaper, etc.) they could be pursued, but would require HQ approval of a “nonstandard estate.” Indicating that lands will be acquired in fee is sufficient for the draft report, but this needs to be worked out so that there is an indication of which lands will be acquired nonstandard in the final report.

Action taken: For the draft report, all lands will be shown as acquired in fee and shall be described in the REP. General language describing pursuing options other than fee will be included in the draft report. A firm determination on the estate to be authorized will be described and included in the final report and REP.

HQUSACE Assessment: The issue is not resolved. See related comment in 3.A.1 above

SPL Response: See response to comment 3.A.1 above. If the issue pertaining to that comment is approved those lands where easements will be sought (Maricopa County Lands) will be described in the Real Estate Plan.

Discussion: Refer to resolution of paragraph 3.A.1.

Action to be taken: See action to be taken on 3.A.1.

HQUSACE Assessment: See Assessment for item 3.A.1. **The issue has been resolved.**

b. Section 3, Description of Lands owned by Non-Federal Sponsor-City of Phoenix: (a) in the third paragraph, the last sentence states that SPL has provided notice to the non-federal sponsor regarding acquiring lands in advance of project authorization. Was this notice given in writing? (b) in the fourth paragraph, should the Federal Government [BLM] be listed as a landowner?

SPL Response: Concur. The sponsor was advised in writing regarding acquisition of lands prior to project authorization. Furthermore the City of Phoenix is the local sponsor on two other large Corps projects and is fully aware of the risk in acquiring lands prior to project authorization. BLM will be included as a landowner.

Discussion: None.

Action taken: As stated above.

HQUSACE Assessment: **The issue is resolved.**

c. Section 4, Non-Standard Estates: (a) delete the last sentence of the paragraph immediately before the text of the proposed non-standard estate, namely, "Such easements will be easements appurtenant and will be acquired so as to 'run with the land.'" (b) in the text of the proposed non-standard estate, insert a comma following the phrase "irrigation systems" and between the word "Phoenix" and the word "Arizona" and revise the punctuation following the phrase "Phoenix Arizona."

Also, regarding the proposed non-standard estate, SPL OC needs to provide a legal opinion that this proposed easement will run with the land and be binding on future fee owners of this property, and meets the requirements of a conservation easement within the state of AZ. This issue was ultimately not required to be addressed in Paseo, due to the revised SPL recommendation that all lands be acquired in fee. A citation to the pertinent AZ statute regarding conservation easements will be needed, as will some legal analysis. Perhaps the text of the proposed non-standard estate will need to be revised to incorporate some of the AZ state statute requirements and/or language, so that the easement text will comply with AZ state law.

SPL Response: In light of the research regarding State Trust Lands the proposed estate will be modified to fee. The Sponsor has asked for the option to acquire Maricopa County lands with easements if that will provide an appropriate interest for the project, and possibly save the taxpayers money. The Non Federal sponsor including the City Attorney and Real Estate Offices are discussing how to proceed with easements or fee title and will provide a decision and rationale for this.

Discussion: Note that if the non-federal sponsor would like the option to acquire the County lands with easements, then eventually the non-standard estate must be formally approved by HQ. Even if the non-federal sponsor provides a rationale for this, a legal opinion will be needed from the District Counsel's Office stating that this proposed easement complies with the state conservation easement statute, etc., per this comment, before approval of the proposed non-standard estate would be considered. The timing of these actions was discussed in detail during the teleconference. The formal request for approval of the non-standard estate may not happen until just prior to signing the PCA. However, the final feasibility report needs to describe accurately the estates to be acquired, so a decision on the estates needs to be included in the final report.

Action taken: See 3. a. above. For the draft report, all lands will be shown as acquired in fee and shall be described in the REP; this avoids the non-standard estate issue. General language describing pursuing options other than fee will be included in the draft report; this allows the sponsor some options. A firm determination on the estate to be authorized will be described and included in the final report and REP. If a non-standard estate is to be proposed, a legal opinion will be needed from the District Counsel's Office stating that this proposed easement complies with the state conservation easement statute, etc., per this comment, before the feasibility report can be finalized.

HQUSACE Assessment: The issue is partially resolved. The estate to be acquired for some of the project lands is still undecided (fee vs. easement). This issue must be resolved prior to the release of the final report.

Discussion: Refer to response for paragraph 3. A. 1.

Action to be taken: Refer to action to be taken for paragraph 3. A. 1..

HQUSACE Assessment: **The issue has been resolved.** See HQUSACE Assessment for item 3.A.1.

d. Section 7, Navigational Servitude: the entire text of this section should be deleted and replaced with the following: "The Salt River is not navigable; therefore, there is no navigation servitude associated with this project."

SPL Response: Concur. Navigational servitude will be deleted from the real estate plan.

Discussion: None.

Action taken: As stated in the response, now reads " the navigation servitude is not being invoked for this project"

HQUSACE Assessment: **The issue is resolved.**

e. Section 11, Crediting for LERRD's: (a) in the second paragraph, the last sentence states, "Only lands deemed necessary to be included in the project have been included."

Please revise the sentence to indicate what the second word “included” refers to-e.g., the Real Estate Plan? (b) in the third paragraph, is the phrase “Lands purchased with Federal funds” redundant in the last sentence?

f. Section 12, Mineral Activity: [First paragraph]: (a) insert “is” between “it” and “thought” in the phrase “At this writing it thought that...” (b) insert “or” between “2006” and “perhaps,” and delete a “t” from the word “latter” in the phrase, “...may occur in 2006 perhaps latter...” (C) insert “or” between “2008” and “perhaps” in the phrase “construction is not anticipated until 2008, perhaps 2010” (d) in that last phrase, why is the year 2009 not mentioned?

[Second paragraph]: (a) delete final “s” in the word “exists” in the phrase “where such materials exists” (b) move “appropriate” and insert it between “found” and “by,” and delete “as” in the phrase “been found by the appraiser as appropriate” (C) revise “has been” to “will be” in the phrase “This has been fully considered when developing a gross appraisal,” or wait until a gross appraisal has been done, and leave that phrase as is.

[Third paragraph]: insert a period following the sentence that makes up this paragraph.

g. Section 13, Sponsor’s Capability Assessment: (a) delete “and” and revise “their” to “its” in the phrase “The City of Phoenix and has demonstrated their capabilities...” (b) insert a period following the last word at the end of the paragraph.

h. Section 14, Other Matters, Other Property Interests, Use of Zoning: The substance of the first sentence was also included at the end of the Mineral Section. Is it necessary to include it in both places?

i. Section 15, LERRD Acquisition Schedule: [First paragraph]: (a) insert a comma following “lands” in the first sentence (b) revise “this is well in hand of their capabilities” to “this is well within its capabilities” (C) Delete the fifth sentence “Also...single contract,” since the concept is contained in the following sentence (d) in “eg.” Insert a period between “e” and “g” and insert a comma following the period following “g”

[Second paragraph]: (a) revise “would” to “should” and delete “at all” in the phrase “the city of Phoenix would have no difficulty at all in acquiring the LERRDS...” (b) insert a comma following “authorization” and “phase” and delete the first “and” in the phrase “WRDA authorization and during the PED phase and during the time” (C) insert a comma following “approval” and “PED,” delete the “and” between “approval” and “during,” and insert “during” between “and” and “development” in the phrase “WRDA approval and during PED and development of a PCA...” (d) insert a comma following “Team” in the phrase “Project Delivery Team.”

j. Section 16, Facility Relocations: [First paragraph]: the first sentence reads, “No information has been provided to date by plan formulation regarding the necessity for any facility relocations in the project area.” The meaning of the phrase “by plan formulation” needs to be clarified. [Second paragraph]: delete the word “and” from the phrase “each facility/utility relocation and that is required...” [Third paragraph]: (a) Insert a period following the word “design” (b) insert a comma following both occurrences of the word “utilities” in “relocation of existing utilities particularly underground utilities will be

avoided...” (C) delete “As,” and insert “is that” between “study” and “the” in the last sentence; additionally, insert a period at the end of the last sentence.

k. Section 17, Relocation Assistance (URA Relocations): insert a comma between “unimproved” and “and” in the last sentence.

l. Section 18, Attitude of Landowners: insert “Tres Rios and Rio Salado” between brackets or parentheses, delete the comma between “and” and “despite” and revise “their” to “its.”

m. Section 20, Recreation: insert a comma between “materials” and “but” in the last sentence.

n. Section 21, Statement of Risks: (a) insert a comma between “herein” and “the river” and revise “has been identified” to “was previously identified” (b) insert a period following “Open Space” and delete the rest of the last sentence.

SPL Response: Editorial corrections will be made to the Draft Report.

Discussion: None.

Action taken: As stated in the response, corrections for comments 4.e through 4.n. will be made to the Draft Report RE Plan.

HQUSACE Assessment: **The issues discussed in section 4.B.3., items e. through n., are resolved,** and revisions have been made to the final report.

4. Page III-11. The map on page III-11 seems to indicate that a corner of the project will be on Gila River Indian Community land, although there does not appear to be a reference to this in the Draft Real Estate Plan, Appendix G. The map in the Real Estate Plan (“Figure 1: Study and Project Area Boundaries”) seems to indicate that no Gila River Indian Community Land is involved. If the map on page III-11 is not mistaken, how will an estate in this corner parcel be acquired?”

SPL Response: The map on III-11 is a very general map with the only purpose to display the general project areas. If you note on the previous and more detailed map showing the study area and potential project area Figure II- 1 and all other detailed maps the GRIC is not included.

Discussion: None.

Action taken: As stated in the response, comment clarified no action necessary.

HQUSACE Assessment: **The issue is resolved.**

5. Page VII-2, Section 7.2.2. In paragraph 1., in the first line, "separable project costs" should be "total project costs", and likewise in the third line, "separate project costs" should be "total project costs".

6. Page VII-3, paragraph 1.e. In the second and third lines, "separable project costs" should be "total project costs".

7. Page VII-3, paragraph 2. Delete the present language and substitute:

"Assume responsibility for operating, maintaining, replacing, repairing, and rehabilitating (OMRR&R) the project or completed functional portions of the project, including mitigation features, without cost to the Government, in a manner compatible with the project's authorized purpose and in accordance with applicable Federal and State laws and specific directions prescribed by the Government in the OMRRR&R manual and any subsequent amendments thereto."

8. Page VII-4, paragraph 9. Delete the present language and substitute:

"Agree that, as between the Government and the non-Federal sponsor, the non-Federal sponsor shall be considered the operator of the project for the purpose of CERCLA liability, and, to the maximum extent practicable, operate, maintain, repair, replace, and rehabilitate the project and otherwise perform its obligations in a manner that will not cause liability to arise under CERCLA."

9. Page VII-4, paragraph 10. Delete the present language and substitute:

"Prevent obstructions of, or encroachments on, the project (including prescribing and enforcing regulations to prevent such obstructions or encroachments) which might reduce the level of protection it affords, hinder its operation and maintenance, or interfere with its proper function, such as any new developments on project lands or addition of facilities which would degrade the benefits of the project."

10. Page VII-5. Add new paragraph 17.

"Provide the non-Federal cost share of that portion of the costs of archeological data recovery activities associated with historic preservation, that are in excess of one percent of the total amount authorized to be appropriated for the project, in accordance with the cost sharing provisions of the agreement."

SPL Response: Concur. Recommended Edits 5-10 will be made to the Draft Report.

Discussion: None.

Action taken: Recommended edits have been made.

HQUSACE Assessment: The issues discussed in sections 4.B.5 through 4.B. 10 are resolved.

C. Plan Formulation

1. Sections 4.2.6.2 and 4.3.3 of the report discuss the projected decline in the biological resources in the study area in the future under the without-project condition. The stressors identified as leading to this projected loss include future residential and industrial development in metropolitan Phoenix, new mining activities, and further diversion of water resources, including effluent, to other uses. It would seem reasonable to assume that local controls on such activities could be implemented to minimize the future declines in habitat. Given the significant decline in natural resource values in the future without-project conditions during the period of analysis, a number of factors under the control of the City of Phoenix, such as development regulations, zoning restrictions, implementation of best management practices, improvements in stormwater management practices or other non-structural and structural measures should be examined in the feasibility study as part of the plan development process. The examination of these measures is needed in accordance with EC 1105-2-409, issued 31 May 2005, entitled “Planning in a Collaborative Environment”. In addition, the examination of the reasonable alternatives not within the jurisdiction of the lead agency (such as the above examples) is required under section 1502.14(c) of the NEPA regulations in order to assure that a complete and holistic assessment of alternatives has been completed for the project. HQUSACE provided a similar comment for the Va Shly Ay Akimel project, and the District was able to provide satisfactory language to resolve the issue.

SPL Response: Future decline of the little remaining habitat within the study area is most likely to be affected by reduced water availability and increased exotic species. Although local zoning and regulations were considered in the plan formulation any changes to them will have little, if any, effect to reduce decline in habitat values in the without project conditions. The non Federal sponsor will be required to comply with the items of non Federal cooperation in order to protect the Federal investment. These will be important considerations for the non Federal sponsor in their decision to participate in this project.

Since water supply is a limiting factor in riparian habitats both storm water and effluent, within local control have been considered in plan formulation. Modification of storm water outfalls and provision of effluent for ecosystem restoration are two important measures considered. One recommendation for local consideration was made in the report as it relates to future storm water discharges to the river. This would require a local zoning change and is entirely up to the local government to implement. That recommendation is included on page VI-2 New Storm water Outfalls.

Discussion: Would the project be susceptible to on-going trends? To extent that stressors can be described where the Corps projects solves and other entities can take care of should be described. City of Phoenix has worked with community advisory committee to look at areas in proximity to the Rio Salado restoration project [“beyond the banks”] to address the type of concerns expressed in the comment.

Action to be taken: As stated in the response. Discussion in the report should be expanded to address the sustainability issues more explicitly. The City may provide verbiage to beef up the collaborative planning efforts, such as explaining the City of Phoenix's efforts for the Rio Salado - "beyond the banks" - and how such efforts would work for Rio Salado Oeste. The report should be clear that the City considered non-structural measures such as zoning, BMPs, and other measures to minimize the decline of habitat values in the future without condition. For reference, the Va Shyl' Ay Akimel Salt River Restoration PGM contains a similar comment/response. In the case of Va Shyl' Ay, such measures were considered, but determined to be impracticable for any number of reasons. The "considered but impracticable" determination is what should be included in the District response to the original comment.

Action Taken: Discussion of recommended non-structural measures being impractical and publicly unacceptable was added to section 5.6. A section describing local planning efforts and BMP's and how they relate to Rio Salado Oeste is being added under Section 5.8.1 Comparison and Evaluation of the Third Array of Alternatives.

HQUSACE Assessment: **The issue is resolved.**

2. Hydrology Future Without Conditions (IV-58). Base flow conditions appear to be construed for the flood damage analysis, but it is unclear how this relates to assumptions for the purpose of assessing ecosystem conditions. How do the base flow assumptions account for the flow enhancement from the upstream Va Shly 'Ay Akimel project and associated effects under the FWO for the purposes of assessing ecosystem conditions?

SPL Response: Base flow in the Salt River is virtually nonexistent. While the Va Shly 'Ay Akimel project may include flow enhancement locally it does not apply to Rio Salado Oeste. That project area is approximately 12 miles upstream and any low flows there would not extend to Oeste because of infiltration and evaporation and also because Tempe Town Lake only passes larger flows.

Low flows do occur within the study area and were accounted for, as possible, in assessing ecosystem conditions. Those low flows are mainly due to storm water as well as dry weather flows. Under existing and presumed FWO project conditions flows entering from upstream Rio Salado (in construction) would continue to fill an in stream depression near the upper end of the study area (19th Avenue) and either evaporate or infiltrate. However, with a restored channel it was assumed that the flow would continue downstream and provide for regeneration of emergent wetland and riparian fringe much like what happened in Rio Salado after the low flow channel was constructed.

Discussion: None.

Action taken: Clarification that base flow is assumed to be nonexistent with the exception of storm water and effluent discharges added to Section 4.3.1 Hydrology.

HQUSACE Assessment: **The issue is resolved.**

3. Sedimentation (IV-59). It appears that the sedimentation assumptions are based on “worst case” years from early in the 20th century when there was more water than today. Why is this assumption valid for future conditions, and how sensitive are cost estimates to assumptions regarding sedimentation and erosion?

SPL Response: The assumption that the sedimentation analysis was based on the “worst case” years is a misnomer. In actuality, for ease of modeling computations, all of the relevant 105 years of historical discharge information were effectively represented by needing only to simulate the period of record from 1889 to 1939. In addition, the constructed continuous 50-year hydrograph also reflects Salt River flood flows that have been normalized by flow regulation at the upstream Roosevelt Dam. Finally, it was assumed that the with- and without hydrologic conditions would not change significantly because the contributing drainage area would not experience radical alterations during subject estimate project life. Therefore, any suspected cost estimate differentials due to different sediment/erosion estimates also becomes moot.

Discussion: None.

Action taken: As stated in response. Clarification added to report in sections 4.3.1 and 4.3.2

HQUSACE Assessment: **The issue is resolved.**

4. Plan Measures. The measures appear to be all-or-nothing options; that is they appear to be formulated for the full study area or nothing at all, rather than in smaller increments. The relationship between differing scales of alternatives, the associated responsiveness of habitat, and connectivity need to be explored so a fuller range of scales of restoration can be displayed. Varying levels of treatment (in addition to varied measures, which are present) need to be evaluated to support a CE/ICA analysis.

SPL Response: Formulation of project alternatives consisted of several steps as described in Sections 5.4 to 5.8. Alternatives were developed first through combining individual measures (features or activities) that contribute to planning objectives. When first combining measures into alternatives considered dependence and combinability of each as described in IWR Report 96-R-21, pages 128-129.

That first set of possible alternatives has no location specific criteria and could be evaluated in any number of increments. However, it was the decision of the PDT to place constraints on plan formulation as not to evaluate an infinite number of solutions and to effectively meet the goals of a restored ecosystem by ensuring a contiguous and connected river corridor. Rationale for doing so goes to the criteria of completeness, effectiveness, efficiency, and acceptability. To be complete and effective restoration alternatives need to provide a restored corridor and connection between the up and downstream projects. The USFWS in their Coordination Act Report discusses “The Rio

Salado Oeste project not only offers a tremendous opportunity to restore native biotic communities along the Salt River, but offers the unique opportunity to provide a link between two other restoration projects, Rio Salado and Tres Rios”. They go on to say that “Vegetation in urban landscapes often lacks the structural components needed by native wildlife. For this reason, we suggest that the Corps and sponsor consider restoring a mosaic of heterogeneous vegetation cover types juxtapositioned to provide substantial edge and habitat diversity.”

In order to provide a complete and effective restoration project the individual measures were sited throughout the study area based first upon site specific conditions (channel, lakes, storm water outfalls) and then sited to maximize the habitat diversity based upon floodplain location, water availability, and ecological conditions.

While additional levels of treatment or scales of alternatives may provide additional data for a CE/ICA analysis it won’t necessarily provide a different plan as suggested in comment n. below. The functional model used to evaluate the project outputs is based upon a holistic view of the ecosystem and takes into account the cumulative effect of the features, not an additive approach. Since the outputs are correlated to not only area and an index but also the cumulative effects (connectivity, hydrology, etc) additional levels of treatment won’t necessarily change the best buy alternative.

Discussion: Concern - If only showing optimal plan and no others, it is difficult to see relative comparative costs and benefits. Formulation process is described. Showing multiple benefits would be helpful to strengthen the project conclusions.

Action to be taken: The report narrative should be expanded and clarified. This relates to the process of developing plan measures, screening alternatives, and CE/ICA (comments 4, 5, and 6). The review team is confident the district can demonstrate that the process was followed, and the resulting recommended plan was arrived at appropriately. However, it is not immediately apparent from the narrative how this was accomplished.

Action taken: Portions of the description of formulation were rewritten and expanded to explain the development of measures, screening alternatives, and the CE/ICA.

HQUSACE Assessment: The issue is not resolved. The sections of the report that were rewritten and expanded are not described, and it appears that no attempt has been made to analyze additional intermediate increments within the various measures developed for the plan. The fact that the USFWS has a preference for any particular suite of habitat components for the Salt River system is not sufficient to justify the examination of a limited number of implementation scales for the various project measures. While it is clear that linking the Rio Salado and Tres Rios projects is desirable, the SPL response does not discuss why the limited scales of implementation in the report are justified. As shown in Table V-8, the scale of implementation of the cottonwood-willow habitat ranges from 348 to 375 acres between the five action alternatives, and only two scales of implementation were considered. Recent experience with other ecosystem restoration

projects suggests that the OASA(CW) will likely pose a number of detailed questions concerning the scaling of restoration measures, and how the scale of the proposed measures relates to the overall cost-effectiveness and incremental building of the recommended plan from the component measures. HQUSACE requests that additional scales of implementation be developed for inclusion in the final feasibility report.

SPL Response: Concur; we were in error by not specifying clearly the changes made to the report made following discussions with HQUSACE in January 2006. The report narrative in response to comments 4, 5, and 6 begins on page V-10, screening of alternatives is on Page V-22, and the CE/ICA referred to in the original comment as rewritten can be found on pages V-46 through V-48 of the Draft Report.

For clarification Table V-8 as included in the Draft Report has a range from 66 to 375 acres of cottonwood-willow. Total acreages between the alternatives range from approx. 750 to 1,500 acres.

To return ecosystem structure, function and processes and improve the potential for survival of a functioning system the restoration must be conceived in a systems context. In formulating project alternatives the team considered first the components required to meet the objective of ecosystem restoration. Connectivity and habitat diversity are critical components to achieve ecosystem restoration in any environment. Alternatives to consider must at a minimum include the necessary components to meet the planned effects. To have a complete and acceptable alternative there must be a diversity of habitat types and connectivity through the 8 mile study area on the Salt River. It was the sponsor and PDT assumption that this systems approach is within compliance with Policy as cited below,

“Restoration projects should be conceived in a systems context, considering aquatic, wetland and terrestrial complexes, as appropriate, in order to improve the potential for long-term survival as self-regulating, functioning systems. This system view will be applied both in the examination of the problems and development of alternative means for their solution. Consideration should be given to the interconnectedness and dynamics of natural systems,...”(ER 1105-2-100, page E-148)

Following discussion and guidance received from HQUSACE, four additional refined alternatives have been analyzed and are described below:

Partial: This alternative restores only the portion of Salt River from 19th to 35th Avenues without any restoration of existing gravel pit lake. It includes capture of storm water from only 4 outfalls. Approximately 270 acres are required for this alternative and restored areas include 15 acres of emergent wetlands, 30 acres of cottonwood-willow, 30 acres of mesquite, and 75 acres of riparian scrub. In addition the low flow channel would encompass approximately 48 acres.

Refine 1: This alternative includes restoration of the river channel from 19th to 83rd Avenues, modification of existing storm water outfalls and restoration of associated

habitats and restoration of the two existing gravel pit lakes. Approximately 1024 acres are required to implement this alternative. Acres restored with this alternative include: cottonwood-willow 210, mesquite 56, wetlands 140, low flow channel 170, riparian scrub 125 and the remaining areas would be scrub shrub.

Refine 2: This refinement restores the river from 19th to 83rd Avenues and includes the same features as Alternative 5A but is scaled back to restore much less cottonwood-willow and mesquite habitats. Approximately 1300 acres are required to implement this alternative. Acres restored include: cottonwood-willow 204, mesquite 110, wetlands 140, low flow channel 170, riparian scrub 125 and the remaining areas would be scrub shrub.

Refine 3: This refinement also restores the river from 19th to 83rd Avenues without restoration of the gravel pit lakes and less acreage of cottonwood-willow and mesquite. Approximately 1130 acres are required to implement this alternative. Acres restored include: cottonwood-willow 169, mesquite 102, wetlands 92, low flow channel 170, riparian scrub 125 and the remaining areas would be scrub shrub.

Below, Table 1 summarizes the outputs, average annual costs and average annual costs per outputs of the original set of alternatives plus additional refined alternatives evaluated.

Table 1. Average Annual Cost per Annual FCU by Alternative

Alternative	AAFCU	AA COST	AAC/AAFCU
Alt 2	51	\$ 2,454	\$ 47.94
Alt 3	162	\$ 7,959	\$ 49.02
Alt 4	165	\$ 7,797	\$ 47.19
Alt 5	240	\$ 14,364	\$ 59.76
Alt 5A	267	\$ 12,106	\$ 45.30
Alt 5B	253	\$ 13,296	\$ 52.59
Partial	33	\$ 1,648	\$ 49.34
Refine 1	133	\$ 7,553	\$ 56.92
Refine 2	187	\$ 8,309	\$ 44.52
Refine 3	87	\$ 5,678	\$ 65.41

The figure below displays the Cost Effective Analysis as performed using IWR-Plan software. This includes analysis of the original alternatives with the new four refinements. Two alternatives are not cost effective, there are two best buy including the tentatively recommended plan identified previously and refinement 2.

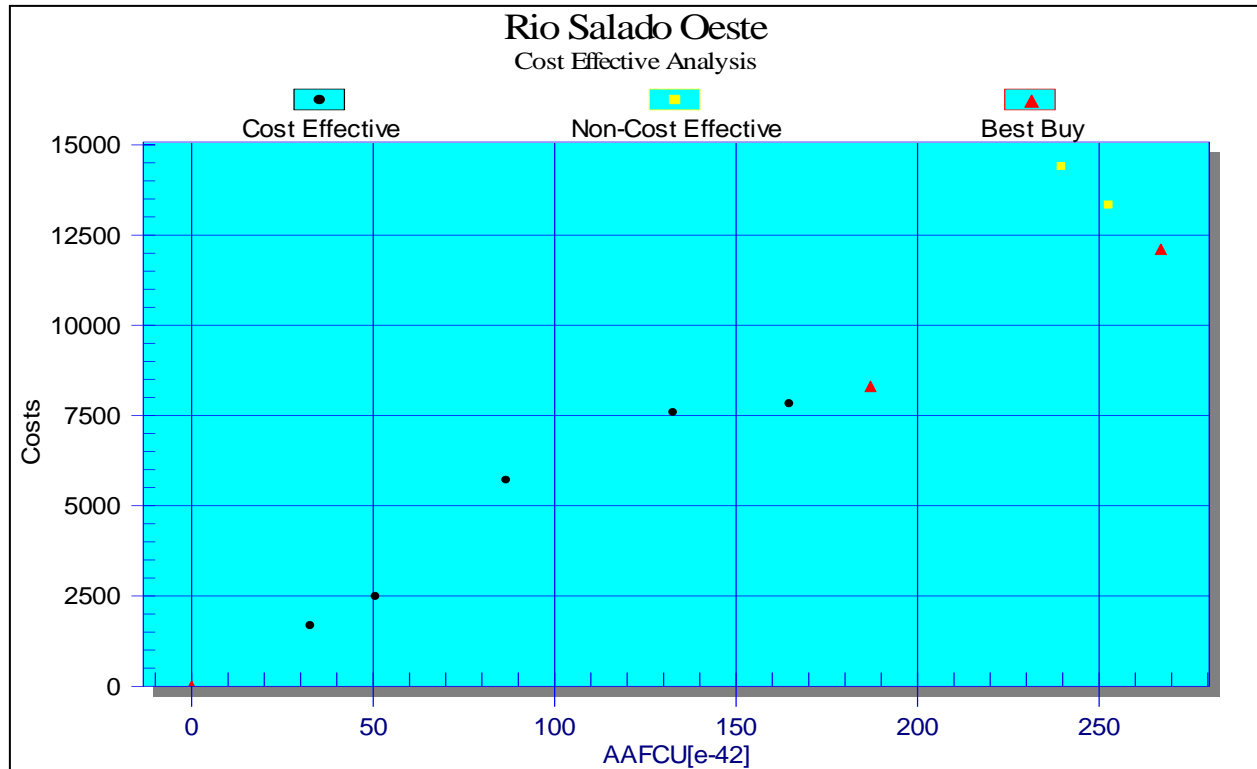
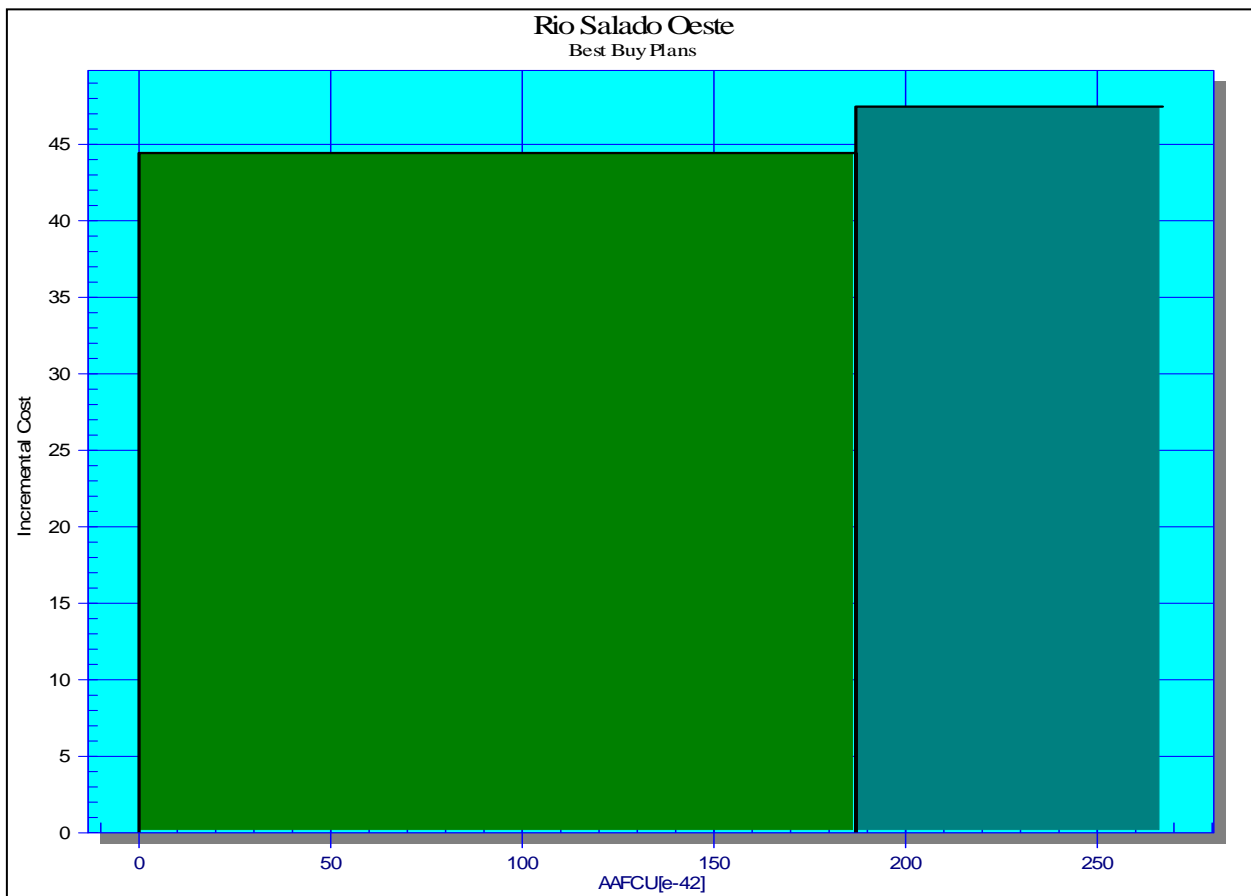


Table 2 and the figure below display the two “Best Buy” plans. In comparing the two plans you can see that the Cost/AAFCU and Incremental Cost/Incremental AAFCU are nearly identical. Alternative 5A provides 42% more AAFCU’s and restores significantly more acreage of scarce and ecologically important cottonwood-willow and mesquite habitats. That includes 171 acres of cottonwood-willow and 307 acres mesquite.

Table 2. Incremental Cost Analysis

	AAFCU	Annual Cost	Cost/AAFCU	Incremental Cost/ Incremental AAFCU
Refine 2	187	\$8,309	\$44.43	\$44.43
Alt 5A	267	\$12,106	\$45.34	\$47.46



Discussion: “Completeness” and “acceptable” are separate characteristics. These characteristics should be considered separately. Reasons for not looking at smaller scale alternatives should be furnished. Range of alternatives appears narrow. Robust justification and strong formulation description should be included.

Action to be taken: Information related to importance of habitat values needs to be considered to support best buy alternative.

HQUSACE Assessment: **The issue has been resolved**, and the above clarifications to Section V and the tables have been added to the final report.

5. Screening Alternatives (V-21 through V-27). The criteria used in the screening process are generally transparent, but the logic supporting their validity needs discussion at the AFB. It is not clear to the reviewers why the specified measures such as cottonwoods or storm outfalls should be mandatory components of any plan (V-26).

SPL Response:

Cottonwood/Willow: The study team decided that cottonwood/willow cover type was determined to be the highest priority for restoration followed by mesquite and wetlands. The decision was made in conjunction with the U.S. Fish and Wildlife Service, Arizona Game and Fish, City of Phoenix and the Corps team members. The validity of this decision is backed by both the significance and rarity of the cover type in Arizona and is supported by the following references: The Arizona Nature Conservancy (1987) rates the cottonwood-willow community as North America's rarest forest type. Southwest riparian areas represent less than 1% of the regions area (Knopf, F. L., 1989), yet 80-90% of vertebrate wildlife species depend on them for food, water, cover and migration (Gillis, 1991). The highest population densities of non-colonial nesting birds in North America, in fact, are in the cottonwood forests of central Arizona (Johnson 1971, Carothers et al. 1974).

Storm water: As described on pages V-23 to V-25 there is potential for increased availability of storm water throughout the study area and opportunities for restoration at the associated outfalls. Outfalls include the inexpensive opportunity of providing additional water to the project area and associated restoration features. Since the watershed is developed tributaries to the river have been replaced by outfalls. The decision was made by the PDT that the storm water measure is a necessary component to any alternative because of the restoration opportunities and potential water source.

Discussion: Effectiveness – how big is the total problem and how much does federal project address. Completeness – how considered in elimination process – by narrative definition before detailed analysis or by ICA/CE. District believes that in either event, the plans eliminated early would have been eliminated later. Mix/composition of habitat type and extent of the restoration in the reach need to be considered. Paragraph 5.7.4 is an example. A better description of the decision matrix will help.

Action taken: Narrative describing the importance of cottonwood/willow cover type and significance of storm water outfalls and rationale for including only alternatives that have those two components in the final array was added.

HQUSACE Assessment: The issue is not resolved. The response does not note where the changes to the report were made, nor does it provide any additional information concerning the validity of a number of the screening criteria. As stated in the original

comment, the report is not clear why the cottonwood-willow measure is an essential component of any habitat restoration plan (i.e., why any plan that did not include this measure would be incomplete). The SPL response, above, is a discussion of the significance of the cottonwood-willow habitat, but does not address the Principles and Guidelines criteria of completeness, effectiveness, efficiency and acceptability. The report simply states that the USFWS recommended that this habitat be restored, and that the PDT accepted this recommendation. The justification of the cottonwood-willow habitat must be developed using the Principles and Guidelines criteria, and a range of implementation scales should be developed for inclusion in the final feasibility report (see HQUSACE Assessment for item #4, above). Related, a similar example of an unsupported decision is the statement that the PDT determined that the stormwater measure was a necessary project component of the plan. The stormwater measure may represent a good opportunity, but the justification of this measure must be demonstrated to be complete and cost-effective.

SPL Response: Not including detailed description of changes made previously was an error. Those changes further describing logic for the screening criteria are included within Pages V-22 to V-24 of the Draft Report. Later in the report Section 5.7.5 (Pages V-28 and V-29) screening of alternatives includes description of the PDT rationale pertaining to cottonwood willow habitat and storm water outfalls that are of concern in the comment.

Cottonwood-willow

Cottonwood-willow cover type is an essential component of any ecosystem restoration plan largely due to its scarcity and significance. The Arizona Nature Conservancy (1987) rates the cottonwood-willow community as North America's rarest forest type. Southwest riparian areas represent less than 1% of the regions area (Knopf, F. L., 1989), yet 80-90% of vertebrate wildlife species depend on them for food, water, cover and migration (Gillis, 1991). The highest population densities of non-colonial nesting birds in North America, in fact, are in the cottonwood forests of central Arizona (Johnson 1971, Carothers et al. 1974).

In a context of Completeness, to meet the objective of ecosystem restoration on the Salt River the team determined that the most scarce and significant habitat type needs to be included. Alternatives lacking this cover type would not contain all of the necessary components to achieve the desired outcome or restoring ecosystem structure and function within the study area. Due to the recognition of the scarcity and significance of cottonwood-willow habitat plans not including that cover type would not be acceptable to the public, resource agencies, or the local sponsor. A range of implementation scales were considered in the CE/ICA, that range being from 30 to 375 acres of cottonwood-willow, see response to item 4 above.

As discussed previously rationale for the study team decision pertaining to cottonwood-willow will be rewritten/expanded at the bottom of Page V-28 to:

1. Cottonwood-willow cover type is widely recognized as a significant and scarce cover type in the Desert Southwest. The Arizona Nature Conservancy (1987) rates the cottonwood-willow community as North America's rarest forest type. Its significance can also be seen in the literature, for example the highest population densities of non-colonial nesting birds in North America, are found in the cottonwood forests of central Arizona (Johnson 1971, Carothers et al. 1974). Cottonwood-willow is an important component of a functioning riparian ecosystem, it is present at all of the reference sites referred to in functional modeling, and meeting the objective of restoration requires that it be included. Therefore the study team determined that not including cottonwood-willow would not be acceptable or effective and alternatives not including it should not be carried forward into detailed evaluation.

Storm water outfalls

The Salt River has little, if any; base flow and tributaries are virtually nonexistent. In the urban area one could consider storm water outfalls to act as tributaries and also potential water source. In considering sources for the project, storm water outfalls are an existing feature and option for obtaining project water supply. Observed conditions within the study area and upstream in the Rio Salado led the team to consider the potential use of storm water outfalls for a supplemental water source. Further investigation determined that the outfalls may provide a significant source of project water and the measure was considered as more than supplemental water.

As summarized on page IV-19 the storm water runoff potential is estimated at between 2,800 and 4,500 acre feet annually. Modifications to maximize capture this water at the 8 existing outfalls, including storm water wetlands, are approximately \$2,300,000. Alternatively, the future acquisition of 2,800 acre feet of water from another source could cost \$1,800 per acre foot or higher, not including the capital cost of delivery to the area (Phoenix Water Resources Acquisition Fee Update, August 2006). Thus, the water supply measure implemented at outfalls offsets the need for additional acquisition potentially costing more than \$5,040,000 annually.

Since they are an existing feature through the study area and provide a simple and cost effective means of project water it was decided that the capture of storm water should be included in any alternative considered. Any restoration of habitat in the Study Area relies on a water source and with little additional investment to capture runoff; the outfalls are by far the cheapest source. Hence, because it was determined early in the plan formulation process that this would be the cheapest source of water, it was deemed logical to include these features in all alternatives.

Discussion: None.

Action to be taken: As stated in response.

HQUSACE Assessment: **The issue is resolved**, and the above information has been included in the draft report.

6. CE/ICA displays (V-43-44). Please add the standard IWR-PLAN line and bar charts for displaying the final array of alternatives, which identify cost-effective and best buy plans as well as the incremental costs (bar chart). In the current display, only Alt 5A would appear as a best buy. It is possible that this will change if alternatives are reconfigured based on Plan Form and Screening discussions (above).

SPL Response: Figure V-4 will be converted into a bar chart to appear more like the IWR-PLAN outputs.

Given the large number of potential features and 8 miles of the study reach, an infinite number of combinations of measures could result from an ICA based upon additional increments or scales of alternatives. As described in the response above the PDT attempted to formulate complete and effective alternatives that address the planning objectives and maximize ecosystem outputs. It was the decision of the PDT to develop logical combinations of measures to form alternatives, with the goal of identifying an array of alternatives that meet the restoration objective.

Discussion: As similarly discussed in 4 and 5 above.

Action to be taken: As stated in the response. Also see comment 4 and 5.

Action taken: Standard IWR Plan CE display added to the report and further description of the CE/ICA and results added.

HQUSACE Assessment: **The issue is resolved.**

7. Section 5.2.3, Opportunities, page V-5. The last two bullets on this page state that opportunities exist to protect cultural resources from erosion and vandalism, and to document the extent and significance of cultural resources. HQUSACE recommends that a discussion be included in the draft report concerning the appropriate party to implement actions to capture these opportunities. As noted in ER 1165-2-501, Corps ecosystem restoration projects must focus on the restoration of ecological resources, and not cultural and historic resources, aesthetic resources, or clean up of hazardous and toxic wastes. Ordinarily, the Corps would only implement these types of activities to the extent that our proposed project would adversely affect cultural resources, and these activities are required as mitigation measures. It is appropriate for the Corps to formulate for these types of opportunities, but unless the Federal project would impact these resources, these opportunities should be presented as potential features of a locally-preferred plan.

SPL Response: The problems and opportunities listed within Section 5.2 are those issues that were raised during the 905(b) analysis and not necessarily meant to be opportunities that were carried forward into the planning objectives listed on Page V-7. The study did not formulate for those opportunities.

Discussion: None.

Action taken: Specified in Section 5.2 Problems and Opportunities that those items listed should not be construed for planning objectives for which solutions are to be formulated.

HQUSACE Assessment: **The issue is resolved.**

8. Section 5.3.2, Specific Planning Objectives. HQUSACE requests clarification of the last bullet in this section, concerning the improvement of environmental-education opportunities. Environmental education is not a Corps mission area, although limited educational materials, such as interpretive signage explaining project features, would be appropriate.

SPL Response: The Planning Objective listed is to “Improve passive recreation and environmental education opportunities”. The PDT realizes that environmental education is not a Corps mission area but it is an item that may be implemented by other agencies. The opportunity for environmental education was identified in the 905(b) and an area which the non Federal sponsor has an interest. That opportunity goes hand in hand with ecosystem restoration and recreation and therefore was included as a Study Objective. Note that the recommended plan does not cost share any environmental education other than interpretive signage but the local sponsor will pursue an environmental education center, identified as a Non Federal item on the Recreation Plan (Table V-17).

Discussion: None.

Action to be taken: None, explanation is sufficient.

HQUSACE Assessment: **The issue is resolved.**

9. Wetland Restoration, section 5.7.2, page V-20. HQUSACE questions whether the proposed wetland construction in the gravel pits recreates a historic wetland type in the area, and whether the proposed construction method has been demonstrated to be successful in the ecoregion. The proposed wetlands would be situated in the center of abandoned gravel pits that would be converted into lake habitats, and the report does not address whether this habitat type is representative of historic habitats in the project area. Based on the review of other riparian restoration projects in Arizona, it is our understanding that the historic habitats of the Salt River consisted of riparian zones with occasional, scattered wetland areas that had a hydrologic connection to the stream.

The proposed lake/wetland complexes would appear to create a habitat type that is not typical of the riverine systems of the arid southwestern US. As stated in EP 1165-2-502, paragraph 7d, “Civil Works ecosystem restoration initiatives attempt to accomplish a return of natural areas or ecosystems to a close approximation of their conditions prior to disturbance, or to less-degraded, more natural conditions”. Given that the proposed lake habitats do not appear to restore a close approximation of natural conditions, HQUSACE

requests the rationale and justification for these features. While it is appropriate to formulate for these features, they may not be appropriate for participation by the Corps, but could be considered as part of a locally-preferred plan. In addition, we request clarification of how these lakes would contribute to the larger ecosystem of the Slat River given the apparent lack of hydrologic connectivity.

SPL Response: A point of clarification and definition is required in reference to the “lakes”. The bodies of water within the study area have been referred to throughout the report as “lakes” and gravel pits. While one restoration measure associated with the alternatives considered modifications to the gravel pits to maintain a permanent lake. However, not all of the alternatives include restoration of “lakes”, instead Alternative 5A includes restoration of emergent wetland and riparian complexes.

The reviewer is correct that emergent wetlands (marshlands) are rare in the Southwest, that rarity makes their ecological value even more significant. Historically in the Salt River, and other Arizona rivers, emergent wetland marshes existed in combination with the other riparian habitat types. In less degraded systems such as the Hassuyampa, Verde or San Pedro emergent wetlands can still be found. Cattail, willow, bulrush and other emergent wetland vegetation dominate emergent wetlands found in those natural systems.

The existing gravel pits are hydrologically connected to the rest of the floodplain, with discharges of approximately 12,000 cfs inundating them. The recommended plan includes a regrading of the existing pits to fully restore that connectivity to the active channel and even more frequent discharges.

Wetland/marsh habitat construction was a part of the Rio Salado project upstream. The proposed construction method applies a similar technique shown to be successful upstream.

Discussion: None.

Action taken: Clarification on the wetlands and lakes added to Section 5.7.2 Ecosystem Restoration.

HQUSACE Assessment: **The issue is resolved.**

10. Section 5.7.4, page V-26, Second Screening of Alternatives. Screening criterion 4 (lake restoration to maintain an open water body and provide urban fishery) appears to have little applicability to the Corps mission areas, and therefore, would be most appropriate for consideration as part of an LPP. This comment is related to the issues discussed in item 4.c.9 above, restoration of historic ecological resources.

SPL Response: Screening criteria are merely a means of narrowing potential array of alternatives since there are not unlimited resources to evaluate each and every possible combination of measures. This second set of criteria referenced was determined by the PDT as criteria relevant to the restoration alternatives being considered. It is not intended

to be a decision as to what is included in the NED/NER plan but as per what alternatives are carried forward for evaluation.

See The Planning Manual (IWR Report 96-R-21) which states on page 122, “Plans don’t have to be restricted to things the Corps has the authority to do”. In this case the lake restoration and provision of a possible urban fishing opportunity is a local priority and considered in alternative formulation and evaluation.

Discussion: If not a feature being carried forward, clarification is not required. If carried forward, the feature needs to be clearly identified as a LPP feature.

Action taken: As stated in the Discussion the feature including lakes as an open water body and urban fishery were not carried forward into an NED/NER plan. Had it been recommended then it would have been identified as an LPP feature.

HQUSACE Assessment: The issue is not resolved. As stated on page ES-2 of the environmental impact statement, creation of a lake (maintain open water and support urban fishery) was clearly used as a screening criterion to reduce the range of alternatives considered for further analysis from twelve in number to five. It is not clear how the lake criterion is relevant to the restoration alternatives to be considered, as stated in the above response. The lake criterion used in the screening process does not support an ecosystem restoration purpose, and therefore the use of this criterion suggests that the analysis may not have correctly identified the NER plan, because a number of potential NER alternatives may have been improperly removed from consideration. HQUSACE requests that the “lake” criterion be eliminated from the screening criteria found on page ES-2, and that the screening process be redone to confirm the choice of the tentatively selected plan.

The fact that the “lake” used in the screening criterion has been transformed in the tentatively selected plan into a wetland complex with an edge of open water is beside the point.

SPL Response: As discussed with HQUSACE July 19 2006 the Criteria 4 on page V-29 and repeated in the EIS will be deleted. The criterion was meant as inclusive criteria to recognize that lake and urban fishery are important to the local community. Alternatives were not deleted from further consideration due to this criteria being specified. There may be opportunities for urban fishing resulting as incidental benefits from project features and this will be pointed out in the report but not utilized as a criteria.

Discussion: Screening without criterion 4 in place should be accomplished to confirm that result of the screening is the recommended plan. Locally preferred plans can be considered.

Action to be taken: Criterion 4 has been eliminated and screening has confirmed the recommended plan.

Additional information on screening criteria provided by SPL on 9/22/2006.

5.7.4 Screening of Second Array of Alternatives

Although the second array of alternatives appeared to be complete and effective at meeting the restoration objective, the study team observed that further refinement would be necessary to aid the selection process. One final screening process was carried out by the study team using the following criteria:

1. Cottonwood-willow cover type is widely recognized as a significant and scarce cover type in the Desert Southwest. The Arizona Nature Conservancy (1987) rates the cottonwood-willow community as North America's rarest forest type. Its significance can also be seen in the literature, for example the highest population densities of noncolonial nesting birds in North America, are found in the cottonwood forests of central Arizona (Johnson 1971, Carothers et al. 1974). Cottonwood-willow is an important component of a functioning riparian ecosystem, it is present at all of the reference sites referred to in functional modeling, and meeting the objective of restoration requires that it be included. Therefore the study team determined that not including cottonwood-willow would not be acceptable or effective and alternatives not including it should not be carried forward into detailed evaluation.

2. Existing storm water outfalls within the study area provide opportunities for restoration and for potential water harvesting. Outfalls include the inexpensive opportunity of providing additional water to the project area and associated restoration features. Since the watershed is developed tributaries to the river have been replaced by outfalls. The decision was made that the storm water measure is a necessary component to any alternative because of the restoration opportunities and potential water source. Therefore, alternatives not including that individual component should be eliminated from further consideration.

3. Channel restoration an important project component for various reasons. It provides a connection to other projects, is a potential means of water distribution, is important for the ecosystem, and contributes to reducing flooding potential. Therefore, alternatives not including that component were not considered. Table V-7 shows the second array of alternatives along with the reasons for dropping individual alternatives from further consideration. As noted in the table at least 3 of the alternatives not only fail to meet criteria listed above but also are very similar to other alternatives.

Data from Table V-7: Second Array of 12 Alternatives

Preliminary Alternatives, Reason Dropped

1. No Action
2. Storm Water, 3
3. Storm Water, Channel
4. Water Supply, Channel, Mesquite, 1
5. Water Supply, Channel, Mesquite, Emergent, Invasive, 1
6. Water Supply, Cottonwood, Channel, Invasive, 2

7. Water Supply, Cottonwood, Channel, Emergent, Invasive, 2, similar to alternative 8
8. Water Supply, Cottonwood, Channel, Mesquite, Invasive, added Storm Water
9. Water Supply, Cottonwood, Channel, Mesquite, Emergent, Invasive, 2, similar to alternative 10
10. Water Supply, Storm Water, Cottonwood, Channel, Mesquite, Emergent, Invasive
11. Water Supply, Lake, Cottonwood, Channel, Mesquite, Emergent, Invasive, 2 water, with inclusion of it same as alternative 12.
12. Water Supply, Lake, Storm Water, Cottonwood, Channel, Mesquite, Emergent, Invasive

The study following set of five alternatives were carried further for development of designs and cost estimates. Those alternatives are:

1. No Action
2. Storm Water and Channel
3. Water Supply, Cottonwood, Channel, Mesquite, Invasive, Storm Water
4. Water Supply, Storm Water, Cottonwood, Channel, Mesquite, Emergent, Invasive
5. Water Supply, Lake, Storm Water, Cottonwood, Channel, Mesquite, Emergent, Invasive

HQUSACE Assessment: The screening criterion that discusses the creation of a permanent open water body to support an urban fishery has been removed from the report, and the 12 alternatives have been re-screened. The selection of the 5 final plan alternatives has been confirmed. The issue is considered to be resolved, and the above revised information from section 5.7.4 has been included in the final report.

D. Policy Issues Raised by the District. Two issues were identified by the district for discussion and resolution at the AFB. They are summarized here.

1. Non-Standard Estate – Channel Improvement Easement for Ecosystem Restoration. The non-standard estate issue has been discussed in comment 3.B.3., and resolved for the draft report. Further input is required prior to the final report being issued, as discussed in comment 3.B.3.a.

HQUSACE Assessment: HQUSACE concurs with the approach discussed above- further work will be completed prior to the release of the draft report.

Discussion: None.

Action to be taken: Refer to paragraph 3. A. 1.

HQUSACE Assessment: **The issue has been resolved.** Refer to paragraph 3. A. 1.

2. Water Supply-Pipeline to Adjacent Farm, Project Cost or Associated Non-Federal Cost

Issue: The City of Phoenix (City) evaluated water supply options for the Rio Salado Oeste Ecosystem Restoration Project. They determined that 8 million gallons per day (mgd) or 8,976 acre feet could be provided from the 23rd Avenue Water Reclamation Plant with certain conditions met. Those conditions include construction of a pump station and pipeline to deliver 1 mgd of effluent to a farm which currently requires a constant 10 mgd diversion, thereby making most of the remainder available to the project. Should the cost of the delivery of water to the farm be a project cost or Associated Non-Federal cost?

Background: The 23rd Avenue Water Reclamation Plant is located at 23rd Avenue immediately north of the project area. That plant was originally constructed in the early 1940's and has been discharging effluent to the Salt River ever since. Discharge points to the river include 35th and 43rd Avenues. Average discharge from the plant between 1996 and 2002 was approximately 53 mgd or 59,000 acre feet.

A farmer (Peterson) has claimed a water right for the effluent as a substitute for river water that once was available to the property (before the SRP dams were constructed). The City does not agree that this is a valid claim, but to avoid escalating litigation, the City has allowed the diversion of 10 mgd to continue for many decades. The 10 mgd delivered to the Peterson Farm at 43rd Avenue is conveyed via open channels to achieve the 1 mgd delivery arrangement. Most of the conveyance system is owned by Peterson. The open channels are subject to high losses from percolation and evaporation. A valve does not control the current water delivery system, so typically a surplus of water is provided with the unused portion going to canal that discharges from the north bank into the Salt River at 43rd Avenue.

In order to reduce the delivery of effluent to Peterson's Farm from the current 10 mgd to a proposed 1 mgd which would then provide Oeste the balance, a pump station is needed at the 23rd Avenue Water Reclamation Plant and a pipe installed to deliver the 1 mgd to Peterson's Farm. The Plant is at 23rd Avenue and Lower Buckeye Road. Peterson Farms is at 43rd Avenue and Lower Buckeye Road. Both are approximately ¾ mile North of the project area.

There is no written contract for the effluent delivery and the "water rights" claim has not been validated by the State's adjudication court (the adjudication process is far from completion), and regardless of the validation of this Claim, the City does not believe it has any legal obligation to provide this water. However, given the City's desire to avoid a potentially lengthy litigation process, the pipeline proposal may be seen as a compromise. It should be noted that there have not been any formal or informal discussions with the Petersons regarding this proposal. So far, it is assumed that they will agree as long as they receive the water they need when they need it (the pipeline would improve the distribution of water to the farm). A "for sale sign" was posted on the property recently but is now absent. The property was apparently rezoned to Industrial. In the reasonable foreseeable future the property will likely be developed to another use. Transfer of the supposed water right to a new landowner is unlikely. A risk here is that

if the land is no longer farmed, the pipeline would not be necessary. There is no estimate at this time as to how long the land will continue to be farmed.

Project Delivery Team Recommendation: The cost of water delivery to Peterson Farms has been included in the Draft Report as an Associated Non-Federal Cost. It is an agreement that the Sponsor has in place that needs to be met or resolved in order to make the additional effluent available for the project. The features and associated right of way required to deliver water to the farm should be considered an Associated Non-Federal cost not a project cost. The water supply distribution system, however, providing the 8 mgd to the project is a cost shared project cost. Additional pumping and piping to the farm outside the project area is separate from that required to deliver effluent for use in ecosystem restoration.

HQUSACE Assessment: **The review team concurs with the project delivery team's recommendation.** The cost of features and associated right of way required to deliver water to the farm should be included in the draft report as an Associated Non-Federal Cost, not a project cost. The water distribution system to provide water to the project is a cost-shared project cost.